

In the Matter of: )  
 )  
COMPLAINT OF GAMEFLY, INC. ) Docket No.: C2009-1

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Postal Regulatory Commission  
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P R O C E E D I N G S

(9:40 a.m.)

COMMISSIONER BLAIR: Good morning, and the hearing will come to order. Today's hearing is in Docket No. 2009-1, the Complaint of GameFly, Incorporated against the Postal Service.

I am Dan Blair, the presiding officer in this proceeding. Joining me on the dais this morning are Vice Chairman Hammond, Commissioners Acton and Langley. I understand Chairman Goldway could not be with us this morning. I believe she's in Chicago. She will be back this afternoon, however.

I remind counsel that this hearing is being web broadcast. In an effort to reduce potential confusion, I ask that counsel wait to be recognized before speaking, and please identify yourself when commenting.

Today we will begin to receive the Postal Service's rebuttal case. Another hearing is scheduled to complete this process on October 14th. Due to the nature of this case a significant amount of materials have been filed subject to protective conditions. Protecting confidential information remains a high priority. While we expect witnesses to answer questions fully, I caution today's witnesses to be



1     aware of materials that are subject to protective  
2     conditions when answering questions.

3             If you are uncertain as to whether an answer  
4     might involve reviewing protected information, you may  
5     consult with counsel on that limited question prior to  
6     answering.

7             The Commission would be grateful if counsel  
8     is able to conduct cross-examination so as to avoid  
9     the need for an in camera session. However, if  
10    necessary, we will conduct a portion of today's  
11    hearing in camera.

12            The procedure for conducting an in camera  
13    hearing is to defer questions that might involve  
14    reference to confidential materials until the  
15    conclusion of the day. A 15-minute recess is then  
16    taken at the end of the public session to allow  
17    interested observers to become subject to an  
18    appropriate confidentiality agreement. The hearing is  
19    then reconvened for a separate in camera session.

20            The transcript for that separate session is  
21    maintained under seal and the in camera hearing will  
22    not be web broadcast.

23            Individuals who choose not to agree to abide  
24    by the confidentiality agreement will be excluded from  
25    the hearing. This process was used successfully in

1 prior hearings in this case.

2 I want to raise another related matter.

3 Many of the documents in this proceeding include  
4 information of nonparties that were identified as  
5 confidential or subject to protective conditions as  
6 proprietary. When referring to exhibits or other  
7 documents during cross examination counsel should take  
8 care to clearly indicate whether they are referring to  
9 public or the nonpublic version of that particular  
10 document.

11 When entering written discovery into the  
12 record, public materials will be identified, first,  
13 for inclusion in today's transcript. Nonpublic  
14 materials, if any, will be separately identified and  
15 included in a separate sealed transcript.

16 Are there any procedural matters that  
17 counsel wish to raise before we begin today? Mr.  
18 Hollies?

19 MR. HOLLIES: The one issue I would like to  
20 raise I think we will get to one way or another, the  
21 designations that we were presented with this morning  
22 from the docket session are those we would have seen  
23 were this hearing held on the original scheduled date.  
24 There has been a fair amount of activity, discovery  
25 activity since that time, and it is my understanding

1     that counsel for GameFly has undertaken to provide two  
2     groups of material. One is the supplemental responses  
3     to questions, including some that were designated for  
4     the previously scheduled hearing, and also responses  
5     that were generated independently and subsequent to  
6     that time, and those materials have been reviewed and  
7     are at the witness stand at this point.

8             COMMISSIONER BLAIR: Thank you.

9             Mr. Levy, did you have any procedural  
10    matters you wanted to raise as well?

11            MR. LEVY: David Levy. No, Commissioner  
12    Blair, I have nothing to add other than to say that I  
13    will be here today with myself and my colleague,  
14    Matthew Field.

15            COMMISSIONER BLAIR: Thank you, and for the  
16    record we have the Public Representative present as  
17    well. Mr. Costich, would you identify yourself,  
18    please?

19            MR. COSTICH: Yes. I'm Randy Costich for  
20    the Public Representative. With me is John  
21    Clingenbird.

22            COMMISSIONER BLAIR: Thank you.

23            Well, now we will call our first witness.  
24    Mr. Hollies, would you like to call your first  
25    witness, please?

1 MR. HOLLIES: The Postal Service calls  
2 Robert Lundahl to the stand.

3 COMMISSIONER BLAIR: Mr. Lundahl, will you  
4 please stand to be sworn in?

5 Whereupon,

6 ROBERT LUNDAHL

7 having been duly sworn, was called as a  
8 witness and was examined and testified as follows:

9 COMMISSIONER BLAIR: Mr. Hollies, please  
10 proceed.

11 DIRECT EXAMINATION

12 BY MR. HOLLIES:

13 Q Mr. Lundahl, you have in front of you two  
14 copies of a document that is labeled USPS-T-4 entitled  
15 Direct Testimony of Robert Lundahl on Behalf of the  
16 United States Postal Service. Do you have those in  
17 front of you?

18 A Yes, I do.

19 Q And what is that document?

20 A This is my original testimony that I  
21 prepared in July of this year.

22 Q Was it prepared by you or under your  
23 direction and control?

24 A Yes, it was prepared by me under my control.

25 Q And if you were to testify orally today,

1 would you testimony be the same?

2 A Yes, it would.

3 Q Are there any errata to that testimony that  
4 you would care to point out?

5 A Yes. There are several minor punctuation  
6 changes, a couple of word changes that might make the  
7 meaning more clear.

8 Q Could you step us through those, please?

9 I believe they are marked in red so you can see  
10 them readily on each page.

11 A Sure.

12 Q And they are marked in the blue copy here as  
13 well?

14 A Make sure. Yes, okay. I guess the first  
15 change is on page ii, the fourth line from the bottom,  
16 I wanted to insert a word there. The corrected  
17 sentence would read, "I was the program manager that  
18 developed the first robotics mail tray handling  
19 application for the Postal Service." The word  
20 "robotics" should be added in there to make that  
21 meaning more clear.

22 Q And would you go through each of the others  
23 as well?

24 A Sure. The next changes are on page 5, line  
25 5 on page 5, the corrected version would read, "This

1 was the primary mode or failure for standard  
2 definition DVDs and a fundamental challenge for  
3 processing under current design of mail handling  
4 equipment as this equipment was not designed with  
5 processing DVDs in mind but has processed other  
6 envelopes without difficulty."

7 So the changes there are to replace the "to"  
8 with "with" and "process" to "processing", "not  
9 designed with processing DVDs in mind."

10 Later on that page on line 21, we have made  
11 a word change here. "These failure points were  
12 generally not the norm but was the result of some sort  
13 of outstanding maintenance issues." So the change  
14 there is to replace "and the" with "but was".

15 The next change is on page 8, line 13, and I  
16 will read the sentence, "Price availability and other  
17 market factors drive the replicators to select one  
18 poly carbonate over another, and what is used for  
19 DVDs," and the change here is "what is used for DVD  
20 movies cannot be assumed to be the same as what was  
21 used in games," et cetera.

22 So the change here is "DVDs", plural,  
23 changing that to "DVD movies".

24 Moving along, page 13, line 19, a word is  
25 added here. "Minimizing the number of sorts minimizes

1 the number of paths undertaken through the sorters and  
2 minimize the number of bends that the DVD is subjected  
3 to." The change there is to insert the word  
4 "undertaking" after "paths"?

5 COMMISSIONER BLAIR: Sorry. Undertaking or  
6 undertaken?

7 THE WITNESS: Undertaken.

8 COMMISSIONER BLAIR: Thank you.

9 THE WITNESS: And I believe that was it.

10 BY MR. HOLLIES:

11 Q Perhaps yours truly failed to mark this, but  
12 I believe there was intended to be a change also on  
13 page 4 in the fifth line.

14 A I've got it. Sorry. The sentence on line  
15 5, page 4, "Many other odd ball failures," we  
16 connected and made that one word "oddball failures,"  
17 so "Many oddball failures were observed for both types  
18 of discs."

19 Q And so with those changes would your  
20 testimony be the same were you to testify orally  
21 today?

22 A Yes.

23 MR. HOLLIES: The Postal Service moves that  
24 the testimony of Robert Lundahl be moved into evidence  
25 and dealt with the transcript as the Commission deems

1 it.

2 COMMISSIONER BLAIR: Are there any  
3 objections?

4 MR. LEVY: No objections.

5 COMMISSIONER BLAIR: Hearing none, the  
6 direct testimony of Mr. Lundahl on behalf of the  
7 Postal Service is received into evidence.

8 (The document referred to was  
9 marked for identification as  
10 USPS-T-4, and received in  
11 evidence.)

12 //

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**USPS-T-4**

BEFORE THE  
POSTAL REGULATORY COMMISSION  
WASHINGTON, D.C. 20268-0001

COMPLAINT OF GAMEFLY, INC.

Docket No. C2009-1

**DIRECT TESTIMONY OF**  
**ROBERT LUNDAHL**  
**ON BEHALF OF THE**  
**UNITED STATES POSTAL SERVICE**

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## **Autobiographical Sketch**

My name is Rob Lundahl. Currently, I am Vice President of the Automated Systems Division at Advanced Technology and Research Corporation ("ATR").

I hold a Bachelor of Science degree in Mechanical Engineering from Western Michigan University and have over twenty-five years of engineering experience. Most of my career has been focused in smaller research and development organizations where I have contributed in a wide range of technical disciplines. I have served as the quality assurance manager for military customers, and established the company's QA system for MIL-I-45208, MIL-Q-9858, and ISO 2001 certifications. As a project engineer I have worked with the Army, Navy, Air Force, and NASA developing a wide variety of one of a kind devices.

I have worked on Postal Service projects over the entire course of my career. These projects have included several failure analysis studies of parts and mechanisms in mail sortation. While at ATR, I and my colleagues have served the Postal Service as a primary supporter of Research & Development activities that have led to the development of many fielded pieces of Postal Service equipment. I was the program manager that developed the first mail tray handling applications at the Postal Service and established the performance parameters for the fielding of these robotic work cells that represented the largest purchase of robotics outside the automotive industry.

1     **Purpose of Testimony**

2             My testimony addresses two areas: (1) the fundamental qualities and  
3     differences among DVDs, including gaming, movie, standard definition and Blu-  
4     ray DVDs; and (2) actions mailers can take to manage or reduce damage to both  
5     DVDs and Postal Service equipment incurred during automated or manual  
6     processing of DVD mail.

7     **Introduction**

8  
9             DVDs are not all the same. Beyond the basic “sandwich” design of  
10    standard DVDs, and the “open-faced sandwich” design of Blu-ray DVDs, they  
11    vary across parameters that affect their flexibility, durability, and resistance to  
12    bending, breaking, impact or scratching. These variations affect the consequent  
13    damage that could occur during preparation for mailing, outbound transit via the  
14    mail, handling by consumers who access content, preparation for transit through  
15    the mail on a return trip, and subsequent transportation and handling by the  
16    originator and ultimate recipient. When in transit through the mail, DVDs face the  
17    risk of damage from mail processing that proper set up, adjustment, and  
18    maintenance of mail processing equipment can help control. These variations,  
19    depending upon how discs are engineered, can be used to engineer discs that  
20    minimize the risks of particular kinds of damage. DVDs face risks of damage  
21    from various types of processing depending, for example, upon the mechanical  
22    twists, impacts and turns a particular piece of equipment imparts. It is also true  
23    that any single processing path does not impose the same risks on all DVDs.

1 The mechanical risk is the same. However, all DVDs are not equal. A more  
2 fatigue-resistant DVD will not be affected the same.

3 As described below, the type of DVDs mailed by GameFly and the  
4 methods GameFly uses to mail those DVDs may make the DVDs shipped by  
5 GameFly more susceptible to damage than the DVDs shipped by Netflix, and  
6 perhaps other DVD mailers. This conclusion stems from the fact that GameFly  
7 has no real understanding of the physical traits of DVDs beyond their thickness,  
8 and to my knowledge they have not conducted a detailed study of DVD failure  
9 modes and mechanisms. By way of contrast, Netflix has studied DVDs, and their  
10 structure and composition, so that it can mail DVDs engineered to minimize risk  
11 of breakage or damage on a round trip, or sequence of round trips, through the  
12 mail. As explained in greater detail in this testimony, analysis leads me to  
13 conclude that GameFly is not similarly situated to Netflix, and likely also other  
14 DVD mailers, with respect to the DVDs it mails, and that GameFly DVDs face a  
15 much greater risk of damage than DVDs mailed by other DVD round trip mailers.  
16 GameFly's apparent lack of understanding of the nature of DVD failure  
17 undermines any credibility for its assertions that it is similar to Netflix or other  
18 DVD mailers. GameFly effectively has no idea how its DVDs incur damage, and  
19 any claim to the contrary lacks credibility.

20 In my experience, DVD mailers can work with manufacturers or sellers to  
21 design DVDs with properties best suited for transit through the mail. They can do  
22 this, either with DVD vendors directly, or by working through their respective

1 manufacturers, whether they work for creators of content or vendors of DVDs  
2 such as Netflix or GameFly.

3 **I. Qualities and Differences of DVDs**

4  
5 All DVDs do not share a common set of qualities and characteristics.  
6 DVDs differ in a variety of ways, including coating, structural composition,  
7 modulus of elasticity, brittleness, and ability to withstand impact and twisting  
8 force imparted by objects of various shapes and strengths. These differences  
9 affect how they may be played, data storage, how data are read, proper storage,  
10 and, most importantly for my testimony, their susceptibility to various possible  
11 sources of damage.

12 Over the last 15 years, my division within ATR, a specialized engineering  
13 firm, has worked as a contractor for Postal Service Engineering to design and  
14 develop new mail processing equipment, work out solutions to particular  
15 challenges, or otherwise provide mechanical engineering services. Finite  
16 element analysis is one tool that has helped us figure out specific challenges with  
17 complex stress patterns requiring analysis. Most of this work was mechanical in  
18 nature and required a broad experience in mail handling technologies and Postal  
19 Service material handling systems.

20 More recently, my firm was retained by Netflix to analyze DVD breakage.  
21 This research looked at the various modes and studied the mechanisms that  
22 could have caused damage. ATR started with an initial classification of failure  
23 modes and visually inspected thousands of failed DVDs. It was evident from the  
24 beginning that the vast majority of standard definition DVD failures were the

1 result of cracks forming from the inside diameter and extending outwards into the  
2 read area. However, the Blu-ray failures were distinctly different. Blu-ray discs  
3 predominantly failed with cracks starting from the outside diameter and  
4 propagating inward to the read area. Clearly, this was a totally different process  
5 at work than the standard definition DVD. Many other odd ball failures were  
6 observed for both types of discs, and these were categorized as more random  
7 from scratching, mis-use, bending or other cracking.

8 The two common modes of failure were designated as material fatigue  
9 failures and mechanical impact failures, and these were generally divided  
10 between the standard definition DVDs and Blu-ray DVDs accordingly.

11 Fatigue failures from repeated bending were the most common  
12 mechanism leading to failure in standard definition DVDs. Fatigue failures are  
13 not absolute breakage mechanisms such as a mechanical impact or cutting.  
14 Fatigue is accumulated over time and is assessed statistically. As a result, this  
15 research required a great deal of destructive testing that ATR performed on  
16 specialized fatigue mechanisms that ATR designed to simulate the bending  
17 stress that the DVDs experience on their path through the mail processing  
18 equipment. The test results were more statistical failures, rather than absolute  
19 fail/no fail tests

20 In the end, the vast majority of standard definition DVD failures are caused  
21 by the repeated bending stresses from mail handling equipment; however, most  
22 material will fatigue and break when subjected to these conditions. Repeated  
23 bending causes material fatigue and the formation of small micro cracks.

1 Continued bending cycles causes these cracks to propagate until they extend  
 2 into the read area, and the playability of the disc is compromised. This was the  
 3 primary mode of failure for standard definition DVDs and a fundamental  
 4 challenge for processing on the current design of mail handling equipment, as  
 5 this equipment was not designed <sup>with</sup> ~~to~~ <sup>ing</sup> process DVDs in mind but has processed  
 6 other envelopes without difficulty.

7 Understanding these fatigue related failures led to several  
 8 recommendations for Netflix to increase the fatigue life of their standard definition  
 9 DVDs and effectively increase their productive life. Key manufacturing steps,  
 10 cutter quality, material quality, UV exposure, and localized reinforcements were  
 11 some of the techniques adopted by Netflix to increase the fatigue life of their  
 12 DVDs.

13 A different mode of failure was observed for Blu-ray DVDs. This mode of  
 14 failure was a mechanical impact failure on the outside diameter of the DVD. The  
 15 vast majority of Blu-ray DVDs exhibited this same form of failure. These failures  
 16 arose generally on the letter processing side and showed a higher geographical  
 17 concentration. This type of failure was an impact failure and traced to missing  
 18 pads or bumpers in mail sorters, incorrectly adjusted finger guards, and other  
 19 misaligned equipment that interfered with the mail flow path. These sources of  
 20 failure were observed and replicated on key equipment. These failure points  
 21 were generally not the norm <sup>but was</sup> ~~and the~~ result of some sort of outstanding  
 22 maintenance issue. It is my understanding that the Postal Service has made  
 23 modifications to resolve these issues.



1           ATR provided the results of our research to Netflix, offered several  
2   recommendations regarding the manufacture of DVDs, and identified specific  
3   mail processing equipment that could cause damage if not properly maintained.  
4   While some details of this work remain confidential and proprietary to Netflix, I  
5   am free to share details that form the content of my testimony.

6           Based on this background, my knowledge and experience, I identify,  
7   below, the most important qualities and differences among DVDs, how the  
8   manufacturing of DVDs can minimize mail processing damage, and opportunities  
9   for improvement of mail processing equipment, all of which Netflix has wielded in  
10   efforts to contain or minimize damage caused by the processing of its mailpieces  
11   on Postal Service and others' processing equipment.

12           **A.     Inside Diameter Hole**

13  
14           My experience reflects that DVDs are consistent in the size and  
15   roundness of their inside diameter holes. However, there are subtle differences in  
16   the quality of the punched hole. A cleaner inside diameter hole results in more  
17   durability, reduced damage, and more accurate playing.

18           Our analysis of processing equipment showed the many bending stresses  
19   to which the DVDs are subjected. ATR performed a Finite Element Model (FEM)  
20   to study these bending stresses and see where there were stress concentrations  
21   in the DVD. (See appendix ATR1). From this analysis it was evident that the  
22   center hole was a major concentration of stresses and this correlated with our  
23   observations of where cracks start to form in the polycarbonate materials.

1 Cracks form where there is the highest stress and this can be initiated by  
2 a very localized stress concentration. ATR performed extensive testing on a  
3 specially designed fatigue machine (See appendix ATR 2) and determined that  
4 there was a correlation with the quality of the hole cut in the center of the DVD.  
5 Holes cut with a new, sharp cutter, showed a far better fatigue life in that they  
6 could withstand many more bending cycles before cracks would begin to form  
7 around the inner diameter.

8 In addition to cutter quality, ATR recommended a review of all other  
9 manufacturing processes where the inside diameter of the DVD hole would be  
10 touched and where it was possible to scratch the internal diameter and cause a  
11 stress concentration. (See appendix ATR 3 for summary test of new cutters).

12 **B. UV Curing**  
13

14 DVDs undergo a wide range of ultraviolet (UV) curing. A greater amount  
15 of UV curing causes a DVD to be more brittle and more susceptible to damage  
16 because exposure to UV radiation changes the mechanical properties of  
17 polycarbonate materials and makes them more brittle and susceptible to fatigue.  
18 Generally, all DVDs manufactured for retail purchase have had some UV  
19 radiation exposure because of the bonding agents applied to UV cured DVDs.  
20 However, UV curing is also used in the printing process and used to harden each  
21 layer of color. Single color labels will have far less radiation than full color prints,  
22 since each layer has to be cured separately. Testing results were difficult to  
23 validate with the number of parameters that cannot be controlled. However, the  
24 damage to plastic caused by UV exposure is commonly understood, and Netflix

1 also understood the likely ramifications from too much UV exposure. Netflix  
2 reviewed its printing techniques and the exposure levels at all steps of the  
3 fabrication process. (See appendix ATR 4 for a summary chart of the improved  
4 printing techniques)

### 5 C. Polycarbonate

6 The polycarbonate used in DVDs varies widely. DVDs composed of  
7 higher quality polycarbonate are more durable and less susceptible to damage.  
8 There are many kinds of polycarbonate plastics used in the construction of  
9 optical discs and, depending on the replicator, the polycarbonates can vary  
10 greatly. Different polycarbonate materials possess different mechanical  
11 properties that greatly affect their resistance to fatigue. Price, availability, and  
12 other market factors drive the replicators to select one polycarbonate over  
13 another, and what is used for DVDs <sup>movies</sup> cannot be assumed to be the same as what  
14 is used on games, given the replication and wholesale price differentials between  
15 the two "formats." Other processing factors can further affect the mechanical  
16 properties, and these can have a profound effect on their overall performance.

17 The basic mechanical parameters for industry polycarbonates vary widely.  
18 Appendix ATR 5 shows representative data for three popular DVD materials in  
19 the form of Charpy impact tests. This test shows the relative amount of energy  
20 that is required to cause failure of a test specimen. The higher the energy  
21 required, the better this material should withstand mechanical stresses before  
22 failure. From this data, it can be seen that the Bayer MACRALON is nearly 15  
23 times stronger than the Teijin Panalite. In addition, all of the polycarbonate

1 materials can have their mechanical properties change significantly based on  
2 how they are heated and dried before the actual injection process.  
3 Manufacturers have different specifications for how long the material is heated,  
4 and this will significantly affect the mechanical properties of the finished product.

5 **D. Replicators**

6 I have noticed that DVD mailers use different replicators. The quality of  
7 these replicators varies, and thus the DVDs from different replicators have  
8 different levels of durability and susceptibility to damage. Because GameFly has  
9 stated that it purchases its DVDs from the manufacturers, it likely does not use  
10 replicators. The manufacturing process for DVDs is critical to their quality.  
11 Cutter quality, material quality, and process integrity are critical, as described  
12 above. Test results show that there can be a significant difference between  
13 machines, even at the same manufacturer.

14 Netflix has a significant investment in understanding all of the variances  
15 and certainly must appreciate how quality manufacturing impacts the long term  
16 quality of their DVDs. For example, recently Netflix has started using a new  
17 covering coat for their Blu-ray DVDs and a new adhesive in their standard  
18 definition DVDs. These newer materials have enhanced mechanical properties  
19 and have further increased the fatigue life of the newly manufactured DVDs.

20 **E. Structural Composition**

21  
22 Most DVD mailers mail both standard definition DVDs and Blu-ray DVDs.  
23 These two types of DVDs have different structural compositions, and face  
24 different risks of damage. Standard definition DVDs are constructed of two 0.6

1 mm pieces of polycarbonate glued together with the DVD being a single-sided,  
2 single layer disc holding up to 4.7 GB of data on a data layer. Blu-ray DVDs are  
3 constructed of a solid 1.1 mm piece of polycarbonate with the additional cover  
4 layer making up for the 0.1 mm differential of the standard definition DVD. The  
5 technology is also different, as a standard definition DVD uses 650 nm red laser  
6 wavelength as opposed to 405 nm blue laser for Blu-ray DVDs, and the Blu-ray  
7 DVD permits a much smaller, highly compressed pit to be etched on the media  
8 surface as compared with the standard definition DVD. Gaming and movie  
9 DVDs include both standard definition DVDs and Blu-ray DVDs. For example,  
10 the wii and Xbox platforms incorporate standard definition DVDs, while the Sony  
11 Playstation platform utilizes Blu-ray DVDs.

12       The mechanical characteristics of standard definition DVDs are much  
13 different than Blu-ray DVDs in the thickness and placement of their layers. The  
14 predominant mode of failure for standard definition DVDs is from fatigue cracks  
15 forming on the inside diameter and propagating outwards. The predominant  
16 failure mode for Blu-ray DVDs is much different. Blu-ray discs fail from the  
17 outside diameter and propagate inwards. This is a much different mode of failure  
18 and indicates a different mechanism and cause.

19       ATR looked at impact failures as the predominant mechanism for the Blu-  
20 ray discs. After inspecting several Postal Service machines, ATR identified a  
21 finger guard that could extend into the mail flow path if it was missing its spring or  
22 was otherwise not aligned as it was designed. This source of failure would be  
23 experienced on the outgoing mail flow and only at select sort points and on a

1 couple versions of the postal DBCS machines. These failures were also  
2 dependant on the orientation of the DVD in the envelope. It is my understanding  
3 that the Postal Service has made modifications to resolve these issues.

4 **II. Actions Available to Reduce Damage to DVDs and Postal Service**  
5 **Equipment**

6  
7 I have worked with the Postal Service on projects related to its automated  
8 processing operations, and, as part of these projects, I have conducted testing  
9 and observations related to automated processing operations. As described  
10 above, a key adjustment was identified in several versions of the DBCS  
11 machines that resulted in much of the Blu-ray DVD damage. Other potential  
12 factors that could impact damage levels in general are bumper pads and belt  
13 tension. Properly maintained and adjusted machines will always improve their  
14 efficiency and safe processing of mailpieces.

15 Many mailers have taken actions to reduce or even avoid the risks of  
16 damage described above without changing the type of mail processing they  
17 receive. I describe some of the more successful practices below. Notably,  
18 GameFly's interrogatory answers suggest that GameFly is not aware of these  
19 options, and has not taken affirmative action to reduce the vulnerability of its  
20 DVDs to damage.

21 **A. Reinforcement Rings**  
22

23 Some mailers equip their DVDs with reinforcement rings on the inside  
24 diameter. ATR evaluated the use of reinforcement rings with an FEM study and  
25 later with actual destructive testing. We discovered that the reinforcement rings  
26 will reduce the rate of crack formation on the inner diameter and also slow the

1 rate of propagation from successive bending. Collectively, this increases the  
2 number of cycles the disc can withstand before failure, and therefore increases  
3 its service life.

4 **B. DVD Handling**

5  
6 DVD mailers utilize different methods of accepting DVDs from a  
7 manufacturer, and these differences can influence a DVD's susceptibility to  
8 damage. As described earlier, any nicks or scratches on the inside diameter of  
9 DVDs will increase their susceptibility to crack formation, leading to propagation,  
10 and eventual failure from repeated bending. Protecting the quality of this inside  
11 diameter is very important. DVDs are generally handled on spindles inside the  
12 manufacturing operation. ATR has identified this as a potential area where  
13 scratches could be formed on the inside diameter of the DVDs and  
14 recommended that these spindles be inspected and the manufacturing process  
15 should avoid excessive handling by the inside diameter or the use of jewel cases.  
16 Appendix ATR 6 shows a photomicrograph of the inside diameter and the types  
17 of scratches that can lower fatigue life.

18 **C. Orientation**

19  
20 The orientation of a DVD inside a mailpiece affects the DVD's  
21 susceptibility to damage. When a mailer orients its DVD on the leading edge of a  
22 mailpiece, the leading edge and the DVD experience a heightened level of  
23 pressure. This increases the likelihood of damage. However, Netflix orients its  
24 outgoing DVDs on the leading edge, and generally its DVDs do not suffer  
25 damage from the automated letter equipment if properly adjusted. Damage

1 assessments bear this out, since leading edge damage would cause cracks to  
2 form from the impact site on the outer diameter. This was true with the Blu-ray  
3 discs on a mis-adjusted sorter. However, this is not a usual mode of failure.  
4 Fatigue related cracks from the inside out are the dominant mode of failure for  
5 DVDs.

6 **D. Transportation**

7 I am aware of a broad range of transportation strategies used by DVD  
8 mailers. Generally, more handling results in a higher likelihood of damage. This  
9 includes both internal handling, and handling within the Postal Service network.  
10 Netflix has succeeded in reducing the amount of handling by developing  
11 automated internal handling processing and requiring minimal handling of its  
12 DVDs within the Postal Service processing network. Netflix has achieved this  
13 result by increasing the number of locations where it picks up and enters its mail  
14 (I believe it now uses 130 locations). In contrast, GameFly enters and picks up  
15 its mail at far fewer locations. Regardless of the type of processing a mailer  
16 receives, more handling will increase the risk of damage. This is an important  
17 strategy in minimizing DVD damage and reflects an understanding of bending  
18 fatigue as the primary source of failure. Minimizing the number of sorts  
19 minimizes the number of paths <sup>undertaken</sup> through the sorters, and minimizes the number of  
20 bends that the DVD is subjected to. This slows the rate of fatigue and increases  
21 the number of rental cycles before fatigue sets in.

22

23



**E. Envelope**

Mailers use a range of envelopes. Some mailers, like Blockbuster, use a mailer that closely fits the size of a DVD; others, like Netflix, use a mailer that has a floppy edge; and still others, like GameFly, use an oversized mailer that more closely resembles a flat shape. The location of flaps, the strength of the paper and any inserts, and the distribution of material affect how a DVD is impacted by automated processing. Mailpieces without floppy edges, like those entered by Blockbuster, are less likely to jam Postal Service equipment and suffer the type of damage that could result from jams. More thickness in the leading edge of a mailpiece tends to reduce the amount of damage, as the leading edge experiences the most pressure during automated processing. Because GameFly enters its DVDs as flats, and most DVD mail is entered as letters, I cannot evaluate GameFly's envelope in this category. In general, the Postal Service processes outgoing Netflix mail on automated letter processing machines, and, despite the floppy trailing edge, for the most part this mail travels through the Postal Service equipment without damage. Understanding that most DVD failures are fatigue failures, reducing the number of bending cycles or the amount of stress in a bending cycle is a key strategy. The use of stiffeners inside the envelope would be a promising strategy to minimize the severity of the bend for the DVD itself. The degree of bend is directly proportional to the stress it receives. Using a stiffener could improve the fatigue life of a DVD without impacting the current machine with existing bend angles.

1   **Conclusion**

2  
3           As described in my testimony above, DVDs vary in their nature and  
4   composition and, accordingly, in their susceptibility to damage. Mailers have  
5   available many options to take affirmative action that reduces the susceptibility of  
6   their DVDs to damage. As explained above, Netflix and other DVD mailers mail  
7   DVDs with inherent characteristics that make DVDs more durable. They also  
8   take other actions that make their DVDs less vulnerable to damage, including the  
9   use of reinforcement rings, maintaining good cutters, maintaining spindle quality,  
10   and limiting the handling of their DVDs. GameFly mails DVDs that may be more  
11   susceptible to damage, since it does not take affirmative action to make its DVDs  
12   more fatigue resistant. GameFly appears to lack basic knowledge about DVDs,  
13   why they fail, and how to increase their fatigue life. GameFly's blanket  
14   statements regarding how its DVDs compare to other DVD mailers have no  
15   credibility without a careful accounting of what remedial actions have been taken  
16   to control materials and process.

17

## APPENDIX ATR 1

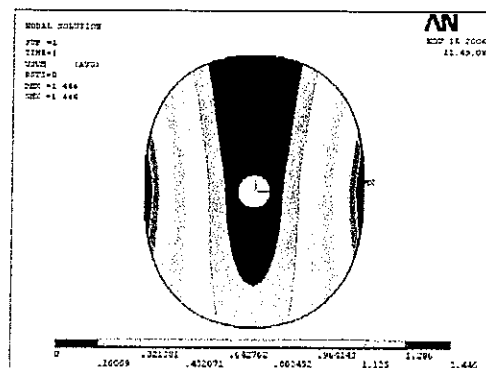
## Appendix ATR 1

### Finite Element Model

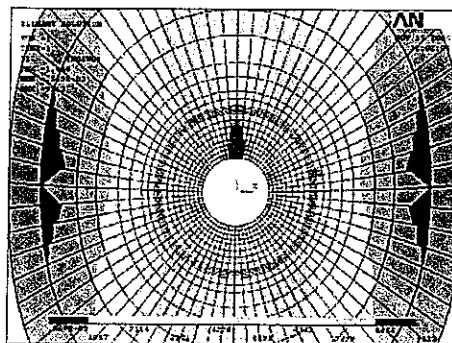
Close up of stress concentrations on the inside diameter



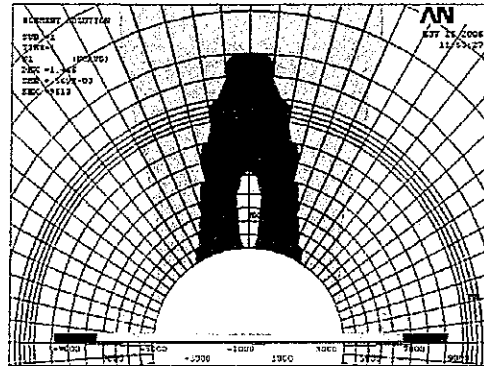
Actual mail path analysis



Model of disc bent around pinch belt sort roller



Close up of stress concentrations at center

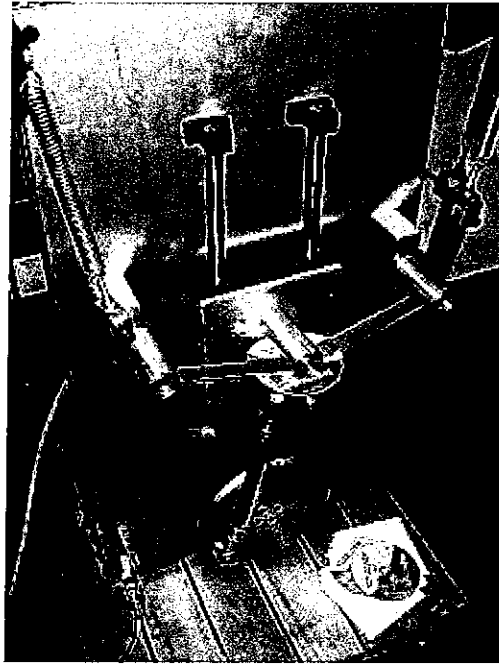


Highest concentration at top of ID in the mail path orientation

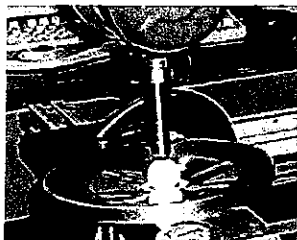
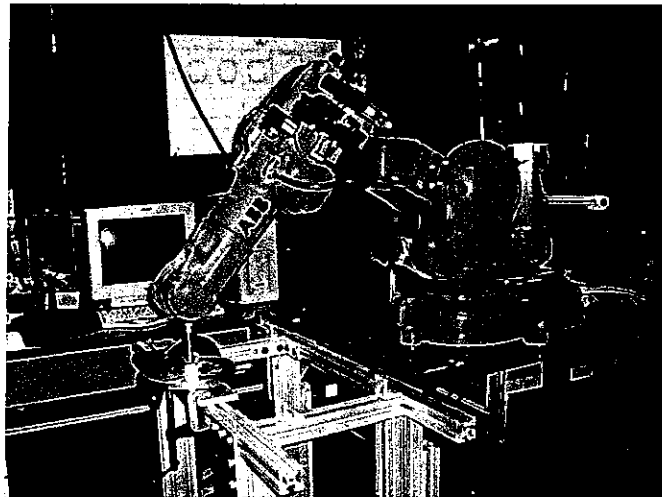
**APPENDIX ATR 2**

## Appendix ATR 2

Specialized fatigue mechanisms used by ATR to evaluate fatigue life in the laboratory.



Reciprocating fatigue device to simulate pinch roller transport



Robotic Hoop Stress fatigue testing.  
Provides omni-directional fatigue test

**APPENDIX ATR 3**



## Appendix ATR 3

Summary test result

New cutter vs Old cutter used in DVD manufacture.

Summary results from Hoop fatigue testing	Earlier Baseline - no printing					
	Old Cutter			New Cutter		
	L1 up	L1 dwn	Avg	L1 up	L1 dwn	Avg
Average when cracks start (when we can see anything at all)	405	500	453	385	415	400
Average when cracks > 0.050	615	850	733	900	1030	965
Average span between starting and final crack >0.050	210	390	300	615	615	565
Average when the final crack starts	495	695	595	690	850	770
age of the time when final crack starts to when it grows > 0.050	120	180	140	210	180	195
Average number of total cracks when finished	14	11	12	27	23	25
DVD that failed with catastrophic cracks	2	2	2.00	0	0	0.00
Reversing Stress cycles						

**APPENDIX ATR 4**

## Appendix ATR 4

Summary test result  
Improvements in printing techniques.

New Data - Comparison of different printing techniques																		
Summary results from Hoop fatigue testing	Old / Pantone			New/Pantone			Old/5 color offset			New/5 color offset			Old/5 color screen			New/5 color screen		
	L1 up	L1 dwn	Avg	L1 up	L1 dwn	Avg	L1 up	L1 dwn	Avg	L1 up	L1 dwn	Avg	L1 up	L1 dwn	Avg	L1 up	L1 dwn	Avg
Average when cracks start (when we can see anything at all)	413	444	428	513	669	591	566	606	581	569	569	569	631	594	613	519	519	519
Average when cracks > 0.050	644	600	622	1131	1306	1219	738	775	756	950	1156	1053	869	769	819	719	806	763
Average span between starting and final crack >0.050	231	150	191	619	770	694	181	170	175	381	510	446	238	150	194	200	250	225
Average when the final crack starts	538	494	516	638	1138	988	644	700	672	800	788	794	725	650	688	638	644	641
Age of the time when final crack starts to when it grows > 0.050	106	120	113	294	190	242	94	80	87	150	320	235	144	80	112	81	160	121
Average number of total cracks when finished	12	8	10	15	15	15	10	10	10	9	13	11	8	6	7	9	14	11
DVD that failed with catastrophic cracks	2	0	1.00	0	0	0.00	3	0	1.50	0	0	0.00	4	0	2.00	0	0	0.00
Reversing Stress cycles	< best in category			< Worst in category			< best in sub category			< Worst in sub category			< poor					

**APPENDIX ATR 5**

## Appendix ATR 5

### Different mechanical properties for Polycarbonates

#### Notched Charpy Impact Test Results

Material	Notched Charpy Impact Value
Bayer Material Science Makrolon OD2015	45 $\text{kJ/m}^2$ or 21.41 $\text{ft-lb/in}^2$
GE Lexan OQ 1030	14 $\text{kJ/m}^2$ or 6.66 $\text{ft-lb/in}^2$
Teijin Kasei America Panlite AD-5503	3 $\text{kJ/m}^2$ or 1.43 $\text{ft-lb/in}^2$

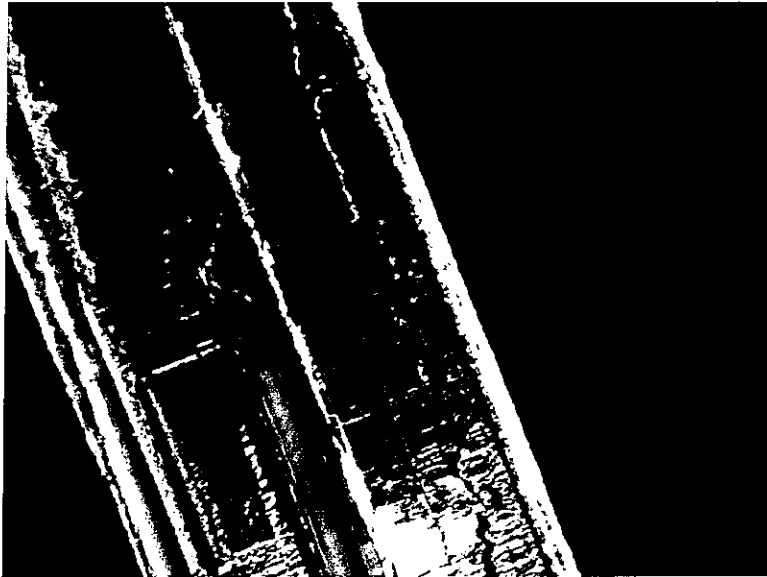
It appears that the Bayer Polycarbonate material is much tougher than the GE or Teijin Kasei America materials. Depending on cost and availability the Bayer material would be the material of choice to make the DVD's from. You should get many more cycles of use before you would have to retire the DVD from service.

## **APPENDIX ATR 6**

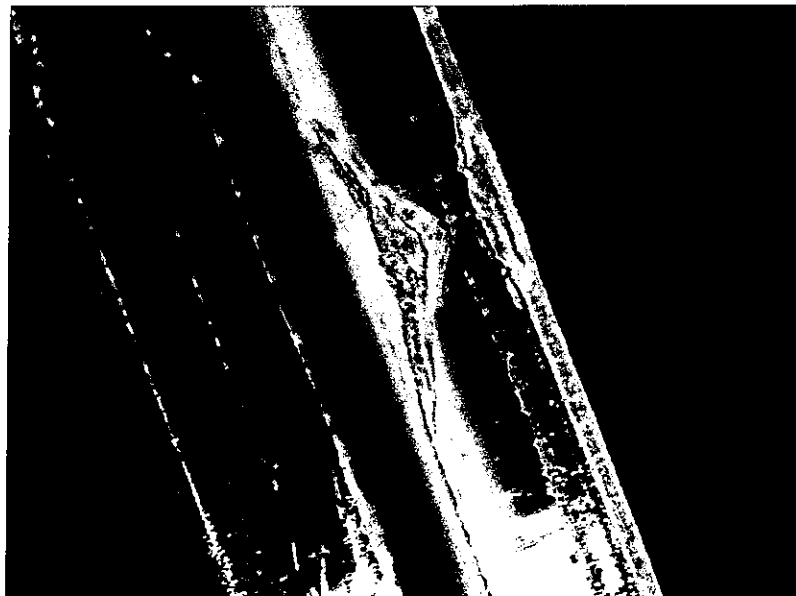
## Appendix ATR 6

### Photomicrographs of DVD Inside Diameters

Cutter marks



Surface defects



1                   COMMISSIONER BLAIR: And also for the  
2 record, Mr. Hollies, could you identify your two  
3 distinguished colleagues with you today?

4                   MR. HOLLIES: Certainly. Mr. Daniel  
5 Foucheaut is to my far left, and James McConey is to  
6 my immediate left.

7                   COMMISSIONER BLAIR: Thank you.

8                   Mr. Lundahl, have you had an opportunity to  
9 examine the packet of written cross-examination that  
10 was made available to you in the hearing room this  
11 morning?

12                  THE WITNESS: Yes, I have.

13                  COMMISSIONER BLAIR: If the questions  
14 contained in that packet were posed to you orally  
15 would your answers be the same as those you previously  
16 provided in writing?

17                  THE WITNESS: Yes, they would.

18                  COMMISSIONER BLAIR: And do you have any  
19 additions or corrections to those?

20                  THE WITNESS: No, I do not.

21                  COMMISSIONER BLAIR: And is there any  
22 objection?

23                  Hearing none the written cross examination  
24 of Witness Lundahl is admitted into evidence. The  
25 reporter is to include this material at this point



1       today. Counsel, would you please provide two copies  
2       of the written cross-examination of the witness to the  
3       reporter, and they are to be received into evidence  
4       and to be transcribed.

5                               (The document referred to was  
6                               marked for identification as  
7                               USPS-T-4 and was received in  
8                               evidence.)

9       //  
10      //  
11      //  
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13      //  
14      //  
15      //  
16      //  
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22      //  
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24      //  
25      //

BEFORE THE  
POSTAL REGULATORY COMMISSION  
WASHINGTON, DC 20268-0001

Complaint of Gamefly, Inc.

Docket No. C2009-1

DESIGNATION OF WRITTEN CROSS-EXAMINATION  
OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL  
(USPS-T-4)

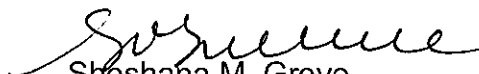
Party

GameFly, Inc.

Interrogatories

GFL/USPS-T4-1-16, 20-21, 23e, 23g, 24-27,  
29-32, 34, 35e, 37b, 37c, 37d, 37e, 38-40, 43

Respectfully submitted,

  
Shoshana M. Grove  
Secretary

INTERROGATORY RESPONSES OF  
UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL (T-4)  
DESIGNATED AS WRITTEN CROSS-EXAMINATION

<u>Interrogatory</u>	<u>Designating Parties</u>
GFL/USPS-T4-1	GFL
GFL/USPS-T4-2	GFL
GFL/USPS-T4-3	GFL
GFL/USPS-T4-4	GFL
GFL/USPS-T4-5	GFL
GFL/USPS-T4-6	GFL
GFL/USPS-T4-7	GFL
GFL/USPS-T4-8	GFL
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GFL/USPS-T4-23e	GFL
GFL/USPS-T4-23g	GFL
GFL/USPS-T4-24	GFL
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GFL/USPS-T4-32	GFL
GFL/USPS-T4-34	GFL
GFL/USPS-T4-35e	GFL
GFL/USPS-T4-37b	GFL

Interrogatory

GFL/USPS-T4-37c  
GFL/USPS-T4-37d  
GFL/USPS-T4-37e  
GFL/USPS-T4-38  
GFL/USPS-T4-39  
GFL/USPS-T4-40  
GFL/USPS-T4-43

Designating Parties

GFL  
GFL  
GFL  
GFL  
GFL  
GFL  
GFL

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-1.** Please produce copies of all documents that you received in connection with your work in this case.

**RESPONSE:**

Please see the public versions of Answers of GameFly, Inc., to USPS Discovery Requests USPS/GFL-1-4, 6-7, 9-38, 40-45; Answers of GameFly, Inc., to USPS Discovery Requests USPS/GFL-47 through 60; Answers of GameFly, Inc., to USPS Discovery Requests USPS/GFL-63 through -83; Supplemental Answers of GameFly, Inc., to USPS Discovery Requests USPS/GFL-5, 8, 16, 38, 46, 49, 51, 54 and 60; Responses of GameFly, Inc., to USPS Requests for Admissions USPS/GFL-1 through 3; Appendix USPS-GFL-50; and Answers of GameFly, Inc., to USPS Discovery Requests USPS/GFL-84 through -103. These documents are all available on the Postal Regulatory Commission website.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-2.** Please produce copies of all documents that you reviewed in connection with your work in this case.

**RESPONSE:**

Please see the response to GFL/USPS-T4-1.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-3.** Please produce a copy of the contract and any other government documents (e.g., statement of scope of deliverables) under which you and your firm have performed your work in this case.

**RESPONSE:**

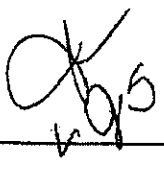
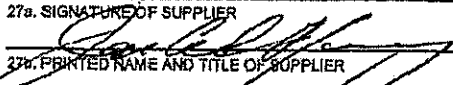

Please see Appendix-GFL/USPS-T4-3.

## **APPENDIX-GFL/USPS-T4-3**

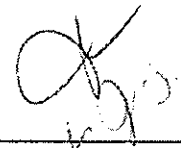
In accordance with common PRC practice, dollar values have been redacted.



## ORDER / SOLICITATION / OFFER / AWARD

OFFEROR TO COMPLETE BLOCKS 13, 14, 16, 22, 23 and 26				1. REQUISITION NO. 10382839		PAGE OF 1 2	
2. CONTRACT/ORDER NO. 2DLGMR-10-B-0007		3. AWARD/ EFFECTIVE DATE 07/01/2010		4. MASTER/AGENCY CONTRACT NO.		5. SOLICITATION NO.	
7. For Solicitation Information Call		a. NAME Jo E. Clemmer		b. TELEPHONE NO. (901) 747-7563		c. FAX NO. (901) 747-7492	
9. ISSUED BY Eastern Services CMC, Memphis United States Postal Service 225 N Humphreys Blvd, RM 1089 Memphis TN 38166-6260  EMAIL: jo.e.clemmer@usps.gov		CODE 2DPSCM		10. ACO CODE 2DPSCM		11. SOLICITATION METHOD  <input type="checkbox"/> RFQ <input type="checkbox"/> RFP <input type="checkbox"/> ORAL	
12. DELIVERY FOR FOR DESTINATION UNLESS BLOCK IS CHECKED  <input type="checkbox"/> SEE SCHEDULE		13. DISCOUNT TERMS See Schedule  		14. SUPPLIER ADVANCED TECHNOLOGY & Attn: ROB LUNDAHL 6650 ELI WHITNEY DR STE 400 COLUMBIA MD 21046-1701  TEL: 301-989-2499 FAX: 443-766-7889 EMAIL: rob@atrcorp.com		15. BILLING ADDRESS USPS - Law Department Brandy Osimokun 475 L'Enfant Plaza, SW Room 6602 WASHINGTON DC 20260-1137	
16. REMITTANCE ADDRESS ADVANCED TECHNOLOGY & RESEARCH 6650 ELI WHITNEY DR STE 400 COLUMBIA MD 210461701  TEL: FAX: EMAIL:		CODE 00001		17. DELIVERY ADDRESS GEN COUNSEL LAW DEPT BUS SVC GEN COUNSEL LAW DEPT BUS SVC USPS 475 LENFANT PLZ SW RM 6027 WASHINGTON DC 202606027  TELEPHONE NO: DELIVER BY/END DATE:		<input type="checkbox"/> CHECK <input checked="" type="checkbox"/> EFT	
18. ITEM NO	19. SCHEDULE OF SUPPLIES/SERVICES			20. QUANTITY	21. UNIT	22. UNIT PRICE	23. AMOUNT
	The contractor, Rob Lundahl, will provide expert witness services, including consultative analysis, support and testimony, to the Postal Service as needed.  LABOR Expert Witness \$ [REDACTED] per hour  Clause 2-38 a.(2) The Contracting Officer has elected not to withhold five percent of the amounts due. This election may be changed with advance notification from the Contracting Continued ...						
24.				TOTAL AWARD AMOUNT (USPS Use Only)		\$50,000.00	
25. <input checked="" type="checkbox"/> The supplier is required to sign this document and return copies to the issuing office. The supplier agrees, subject to the terms and conditions specified herein, to provide and deliver all items identified above and on any additional sheets.				26. <input type="checkbox"/> Award of Contract: Your offer on Solicitation (block 5) is accepted as to items			
27a. SIGNATURE OF SUPPLIER 				28a. UNITED STATES POSTAL SERVICE (SIGNATURE OF CONTRACTING OFFICER) 			
27b. PRINTED NAME AND TITLE OF SUPPLIER Dr. Jackson C.S. Yang, President				27c. DATE SIGNED 20 Jul 2010		28b. PRINTED NAME OF CONTRACTING OFFICER Lynn J. Sartain, C.P.M.	
				28c. DATE SIGNED 7-28-2010			

## ORDER / SOLICITATION / OFFER / AWARD

OFFEROR TO COMPLETE BLOCKS 13, 14, 16, 22, 23 and 26				1. REQUISITION NO. 10382839		PAGE OF 1 2	
2. CONTRACT/ORDER NO. 2DLGMR-10-B-0007		3. AWARD/ EFFECTIVE DATE 07/01/2010	4. MASTER/AGENCY CONTRACT NO.		5. SOLICITATION NO.		6. SOLICITATION ISSUE DATE
7. For Solicitation Information Call	8. NAME Jo E. Clemmer		9. TELEPHONE NO. (901) 747-7563		10. FAX NO. (901) 747-7492		11. OFFER DUE DATE/TIME
12. ISSUED BY Eastern Services CMC, Memphis United States Postal Service 225 N Humphreys Blvd, RM 1089 Memphis TN 38166-6260  EMAIL jo.e.clemmer@usps.gov			13. ACO CODE 2DPSCM	14. SOLICITATION METHOD  <input type="checkbox"/> RFQ <input type="checkbox"/> RFP <input type="checkbox"/> ORAL	15. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS CHECKED  <input type="checkbox"/> SEE SCHEDULE	16. DISCOUNT TERMS See Schedule 	
17. SUPPLIER CODE 1000316719 ADVANCED TECHNOLOGY & Attn: ROB LUNDAHL 6650 ELI WHITNEY DR STE 400 COLUMBIA MD 21046-1701  TEL: 301-989-2499 FAX: 443-766-7889 EMAIL: rob1@atrcorp.com			18. BILLING ADDRESS USPS - Law Department Brandy Osimokun 475 L'Enfant Plaza, SW Room 6602 WASHINGTON DC 20260-1137				
19. REMITTANCE ADDRESS CODE 100001 ADVANCED TECHNOLOGY & RESEARCH 6650 ELI WHITNEY DR STE 400 COLUMBIA MD 210461701  TEL: FAX: EMAIL:			20. DELIVERY ADDRESS GEN COUNSEL LAW DEPT BUS SVC GEN COUNSEL LAW DEPT BUS SVC USPS 475 LENFANT PLZ SW RM 6027 WASHINGTON DC 202606027  TELEPHONE NO: DELIVER BY/END DATE:  <input type="checkbox"/> CHECK <input checked="" type="checkbox"/> EFT				
21. ITEM NO	22. SCHEDULE OF SUPPLIES/SERVICES			23. QUANTITY	24. UNIT	25. UNIT PRICE	26. AMOUNT
	The contractor, Rob Lundahl, will provide expert witness services, including consultative analysis, support and testimony, to the Postal Service as needed.  LABOR Expert Witness [REDACTED] per hour  Clause 2-36 a.(2) The Contracting Officer has elected not to withhold five percent of the amounts due. This election may be changed with advance notification from the Contracting Continued ...						
27. TOTAL AWARD AMOUNT (USPS Use Only)				28. \$30,000.00			
29. <input checked="" type="checkbox"/> This supplier is required to sign this document and return copies to the issuing office. The supplier agrees, subject to the terms and conditions specified herein, to provide and deliver all items identified above and on any additional sheets.				30. <input type="checkbox"/> Award of Contract: Your offer on Solicitation (block 5) is accepted as to items			
31. SIGNATURE OF SUPPLIER				32. UNITED STATES POSTAL SERVICE (SIGNATURE OF CONTRACTING OFFICER)			
33. PRINTED NAME AND TITLE OF SUPPLIER		34. DATE SIGNED		35. PRINTED NAME OF CONTRACTING OFFICER Lynn J. Sartain, C.P.M.		36. DATE SIGNED	

CONTINUATION SHEET				REQUISITION NO. 1038283		PAGE OF 2 2	
CONTRACT/ORDER NO. 2DLGMR-10-B-0007		AWARD/ EFFECTIVE DATE 07/01/2010	MASTER/AGENCY CONTRACT NO.		SOLICITATION NO.		SOLICITATION ISSUE DATE
ITEM NO	SCHEDULE OF SUPPLIES / SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
	<p>Officer.</p> <p>Clause 2-38 Ceiling Price: The ceiling price will be established on a "per support required" basis and will be determined by the COR, which will be appointed by the USPS Law Department. The current COR is Brandy Osimokun.</p> <p>The term of the contract is a 1-year base contract with two 1-year options.</p> <p>Sub Rept Req'd: N Payment Terms: NET30</p> <p>Accounting Info:</p> <p>EFN: 106412</p> <p>Period of Performance: 07/01/2010 to 06/30/2011</p>						
00001	<p>Expert Witness services as defined in the attached Statement of Work.</p> <p>This will be a 1 year contract with (2) 1 year options.</p> <p>Account Number: 52322</p> <p>Award Type: Labor-hour</p> <p>FOB: Destination</p> <p>The total amount of award: [REDACTED]. The total amount for this award is shown in box 24.</p>				[REDACTED]		

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# PART I - COVER SHEET AND SCHEDULE

## ACKNOWLEDGMENT OF AMENDMENTS

The offeror acknowledges receipt of amendments to the solicitation numbered and dated as follows:

Amendment Number	Date	Amendment Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

## REMITTANCE ADDRESS

Remittance Address (if different from Block 16, PS Form 8203)

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## INVOICE STATEMENT

All invoices MUST reference the Contract Number and corresponding line item number listed on this purchase document. Invoices not in compliance may result in delayed payment.

## NAICS SELF-CERTIFICATION

For supplier self-certification, NAICS code 8012000000, is applicable to this solicitation (for more information visit [www.sba.gov](http://www.sba.gov)).

## PRIVACY ACT STATEMENT

### PRIVACY ACT STATEMENT

To the extent that the information you provide is about an individual, the Privacy Act will apply. Collection of that information is authorized by 39 USC 401. As a routine use, the information may be disclosed to an appropriate government agency, domestic or foreign, for law enforcement purposes; where pertinent, in a legal proceeding to which the USPS is a party or has an interest; to a government agency in order to obtain information relevant to a USPS decision concerning employment, security clearances, contracts, licenses, grants, permits, or other benefits; to a government agency upon its request when relevant to its decision concerning employment, security clearances, security, or suitability investigations, contracts, licenses, grants, or other benefits; to a congressional office at your request; to an expert, consultant, or other person under contract with the USPS to fulfill an agency function; to the Federal Records Center for storage; to the Office of Management and Budget for review of private relief legislation; to an independent certified public accountant during an official audit of USPS finances; to an investigator, administrative judge or complaints examiner appointed by the Equal Employment Opportunity Commission for investigation of a formal EEO complaint under 29 CFR 1614; to the Merit Systems Protection Board or Office of Special Counsel for proceedings or investigations involving personnel practices and other matters within their jurisdiction; to a labor organization as required by the National Labor Relations Act; to a federal, state or local agency, financial institution or other appropriate entity for the purpose of verifying an individual's or entity's eligibility or suitability for engaging in a transaction. In addition, the following disclosures may be made to any person: a solicitation mailing list when a purchase is highly competitive and competitions will not be harmed by release, or to provide an opportunity for potential subcontractors seeking business; a list of lessors of real or personal property to the Postal Service; a list of entities with whom the Postal Service transacts for goods or services, interests in real property, construction, financial instruments, or intellectual property; and the identity of the successful offeror. Completion of this form is voluntary; however, if this information is not provided, we will be unable to process your request.

### CONTRACTS BETWEEN USPS AND ITS EMPLOYEES

Generally USPS does not enter into contracts with its employees, their immediate families, or business organizations substantially owned or controlled by USPS employees or their immediate families. "Immediate family" means spouse, minor child or children, and individuals related to the employee by blood who are residents of the employee's household.

- (a) Is the offeror an employee of USPS or a member of the family of a USPS employee?
- ☐ Yes ☒ No
- (b) Is the offeror's business organization (partnership, corporation, joint venture) substantially owned or controlled by a USPS employee or a member of his or her immediate family?
- ☐ Yes ☒ No

## PART 2 - PROVISIONS

## PROVISION 4-3 REPRESENTATIONS AND CERTIFICATIONS (MARCH 2006)

a. Type of Business Organization. The offeror, by checking the applicable blocks, represents that it:

(1) Operates as:

☒ a corporation incorporated under the laws of the state of Maryland; or country of \_\_\_\_\_, if incorporated in a country other than the United States of America.

☐ an individual;

☐ a partnership;

☐ a joint venture;

☐ a limited liability company;

☐ a nonprofit organization; or

☐ an educational institution; and

(2) Is (check all that apply)

☒ a small business concern;

☒ a minority business (indicate minority below):

☐ Black American

☐ Hispanic American

☐ Native American

☒ Asian American:

☐ a woman-owned business; or

☐ none of the above entities.

(3) Small Business Concern. A small business concern for the purposes of Postal Service purchasing means a business, including an affiliate, that is independently owned and operated, is not dominant in producing or performing the supplies or services being purchased, and has no more than 500 employees, unless a different size standard has been established by the Small Business Administration (see 13 CFR 121, particularly for different size standards for airline, railroad, and construction companies). For subcontracts of \$50,000 or less, a subcontractor having no more than 500 employees qualifies as a small business without regard to other factors.

(4) Minority Business. A minority business is a concern that is at least 51 percent owned by, and whose management and daily business operations are controlled by, one or more members of a socially and economically disadvantaged minority group, namely U.S. citizens who are Black Americans, Hispanic Americans, Native Americans, or Asian Americans. (Native Americans are American Indians, Eskimos, Aleuts, and Native Hawaiians. Asian Americans are U.S. citizens whose origins are Japanese, Chinese, Filipino, Vietnamese, Korean, Samoan, Laotian, Kampuchean (Cambodian), Taiwanese, in the U.S. Trust Territories of the Pacific Islands or in the Indian subcontinent.)

(5) Woman-owned Business. A woman-owned business is a concern at least 51 percent of which is owned by a woman (or women) who is a U.S. citizen, controls the firm by exercising the power to make policy decisions, and operates the business by being actively involved in day-to-day management.

(6) Educational or Other Nonprofit Organization. Any corporation, foundation, trust, or other institution operated for scientific or educational purposes, not organized for profit, no part of the net earnings of which inures to the profits of any private shareholder or individual.

b. Parent Company and Taxpayer Identification Number

(1) A parent company is one that owns or controls the basic business policies of an offeror. To own means to own more than 50 percent of the voting rights in the offeror. To control means to be able to formulate, determine, or veto basic business policy decisions of the offeror. A parent company need not own the offeror to control it; it may exercise control through the use of dominant minority voting rights, proxy voting, contractual arrangements, or otherwise.

(2) Enter the offeror's U.S. Taxpayer Identification Number (TIN) in the space provided. The TIN is the offeror's Social Security number or other Employee Identification Number (EIN) used on the offeror's Quarterly Federal Tax Return, U.S. Treasury Form 941, or as required by Internal Revenue Service (IRS) regulations.

Offeror's TIN: 52-0977059

(3) Check this block if the offeror is owned or controlled by a parent company: \_\_\_\_\_

(4) If the block above is checked, provide the following information about the parent company:

Parent Company's Name: \_\_\_\_\_

Parent Company's Main Office: \_\_\_\_\_

Address: \_\_\_\_\_

No. and Street: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Parent Company's TIN: \_\_\_\_\_

(5) If the offeror is a member of an affiliated group that files its federal income tax return on a consolidated basis (whether or not the offeror is owned or controlled by a parent company, as provided above) provide the name and TIN of the common parent of the affiliated group:

Name of Common Parent: \_\_\_\_\_

Common Parent's TIN: \_\_\_\_\_

**c. Certificate of Independent Price Determination**

(1) By submitting this proposal, the offeror certifies, and in the case of a joint proposal each party to it certifies as to its own organization, that in connection with this solicitation:

(a) The prices proposed have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to the prices with any other offeror or with any competitor;

(b) Unless otherwise required by law, the prices proposed have not been and will not be knowingly disclosed by the offeror before award of a contract, directly or indirectly to any other offeror or to any competitor; and

(c) No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not submit a proposal for the purpose of restricting competition.

(2) Each person signing this proposal certifies that:

(a) He or she is the person in the offeror's organization responsible for the decision as to the prices being offered herein and that he or she has not participated, and will not participate, in any action contrary to paragraph a above; or

(b) He or she is not the person in the offeror's organization responsible for the decision as to the prices being offered but that he or she has been authorized in writing to act as agent for the persons responsible in certifying that they have not participated, and will not participate, in any action contrary to paragraph a above, and as their agent does hereby so certify; and he or she has not participated, and will not participate, in any action contrary to paragraph a above.

(3) Modification or deletion of any provision in this certificate may result in the disregarding of the proposal as unacceptable. Any modification or deletion should be accompanied by a signed statement explaining the reasons and describing in detail any disclosure or communication.

**d. Certification of Nonsegregated Facilities**

(1) By submitting this proposal, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract.

(2) As used in this certification, segregated facilities means any waiting rooms, work areas, rest rooms or wash rooms, restaurants or other eating areas, time clocks, locker rooms or other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment area, transportation, or housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise.

(3) The offeror further agrees that (unless it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors before awarding subcontracts exceeding \$10,000 that are not exempt from the provisions of the Equal Opportunity clause; that it will retain these certifications in its files; and that it will forward the following notice to these proposed subcontractors (except when they have submitted identical certifications for specific time periods):

Notice: A certification of nonsegregated facilities must be submitted before the award of a subcontract exceeding \$10,000 that is not exempt from the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (quarterly, semiannually, or annually).

**e. Certification Regarding Debarment, Proposed Debarment, and Other Matters (This certification must be completed with respect to any offer with a value of \$100,000 or more.)**



- (1) The offeror certifies, to the best of its knowledge and belief, that it or any of its principals:
- (a) Are \_\_\_ are not X presently debarred or proposed for debarment, or declared ineligible for the award of contracts by any Federal, state, or local agency;
  - (b) Have \_\_\_ have not X, within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property;
  - (c) Are \_\_\_ are not X presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subparagraph (b) above;
  - (d) Have \_\_\_ have not X within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in conjunction with obtaining, attempting to obtain, or performing a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion or receiving stolen property; and
  - (e) Are \_\_\_ are not X presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subparagraph (d) above.
- (2) The offeror has \_\_\_ has not X, within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal, state, or local agency.
- (3) "Principals," for the purposes of this certification, means officers, directors, owners, partners, and other persons having primary management or supervisory responsibilities within a business entity (e.g., general manager, plant manager, head of a subsidiary, division, or business segment, and similar positions).
- (4) The offeror must provide immediate written notice to the contracting officer if, at any time prior to contract award, the offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (5) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered as part of the evaluation of the offeror's capability (see the Conduct Supplier Capability Analysis topic of the Evaluate Proposals task of Process Step 2: Evaluate Sources, in the Postal Service's Supplying Practices). The offeror's failure to furnish a certification or provide additional information requested by the contracting officer will affect the capability evaluation.
- (6) Nothing contained in the foregoing may be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (7) This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under section 1001, Title 18, United States Code.
- (8) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Postal Service, the contracting officer may terminate the contract resulting from this solicitation for default.

f. Incorporation by Reference. Wherever in this solicitation or contract a standard provision or clause is incorporated by reference, the incorporated term is identified by its title, its provision or clause number assigned to it, and its date. The text of incorporated terms may be found at

<http://www.usps.com/purchasing/purchasingpubs/pubsmenu.htm> If checked, the following provision(s) is incorporated in this solicitation by reference: (contracting officer will check as appropriate)

- ☐ (1) Provision 1-2: Domestic Source Certificate - Supplies
- ☐ (2) Provision 1-3: Domestic Source Certificate - Construction Materials
- ☐ (3) Provision 9-1: Equal Opportunity Affirmative Action Program
- ☐ (4) Provision 9-2: Preaward Equal Opportunity Compliance Review
- ☐ (5) Provision 9-3: Notice of Requirements for Equal Opportunity Affirmative Action

### PART 3 - CONTRACT CLAUSES

#### CLAUSE B-18 SUBCONTRACTS (MARCH 2006)

#### CLAUSES INCORPORATED BY REFERENCE

The above clauses are incorporated by reference as if set forth in full text. The text of these clauses may be accessed electronically at this address: <http://www.usps.com/purchasing/purchasingpubs/pubsmenu.htm> or, upon request, will be provided by the contracting officer.

#### CLAUSE B-3 CONTRACT TYPE (MARCH 2006)

This is a Labor Hours contract.

#### CLAUSE 1-11 PROHIBITION AGAINST CONTRACTING WITH FORMER OFFICERS OR PCES EXECUTIVES (MARCH 2006)

During the performance of this contract, former Postal officers or Postal Career Executive Service (PCES) executives are prohibited from employment by the contractor as key personnel, experts or consultants, if such individuals, within 1 year after their retirement from the Postal Service, would be performing substantially the same duties as they performed during their career with the Postal Service.

#### CLAUSE 1-12 USE OF FORMER POSTAL SERVICE EMPLOYEES (MARCH 2006)

During the term of this contract, the supplier must identify any former Postal Service employees it proposes to be engaged, directly or indirectly, in contract performance. Such individuals may not commence performance without the contracting officer's prior approval. If the contracting officer does not provide such approval, the supplier must replace the proposed individual former employee with another individual equally qualified to provide the services called for in the contract.

#### CLAUSE 2-19 OPTION TO EXTEND (SERVICES CONTRACT) (MARCH 2006)

The Postal Service may require the supplier to continue to perform any or all items of services under this contract within the limits stated in the Schedule. The contracting officer may exercise this option, at any time within the period specified in the Schedule, by giving written notice to the supplier. The rates set forth in the Schedule will apply to any extension made under this option clause.

#### CLAUSE 2-38: PAYMENT (TIME-AND-MATERIALS AND LABOR-HOUR CONTRACTS) (MARCH 2006)

The Postal Service will pay the supplier as follows upon submission of invoices or vouchers approved by the contracting officer:

##### a. Hourly Rate

(1) The amounts will be computed by multiplying the appropriate hourly rates prescribed in the Schedule by the number of direct labor hours performed. The rates will include wages, indirect costs, general and administrative expenses, and profit. Fractional parts of an hour will be payable on a prorated basis. Vouchers may be submitted once each month (or at more frequent intervals if approved by the contracting officer). The supplier will substantiate vouchers by evidence of actual payment and by individual daily job timecards, or other substantiation approved by the contracting officer. Promptly after receipt of each substantiated voucher, the Postal Service will, except as otherwise provided in this contract, and subject to the terms of paragraph e below, pay the voucher as approved by the contracting officer.

(2) Unless otherwise prescribed in the Schedule, the contracting officer will withhold five percent of the amounts due under this paragraph a, but the total amount withheld may not exceed \$50,000. The amounts withheld will be retained until the execution and delivery of any required release by the supplier.

(3) Unless the Schedule prescribes otherwise, the hourly rates in the Schedule must not be varied by virtue of the supplier having performed work on an overtime basis. If no overtime rates are provided in the Schedule and overtime work is approved in advance by the contracting officer, overtime rates may be negotiated. If the Schedule provides rates for overtime, the premium portion of those rates will be reimbursable only to the extent the overtime is approved by the contracting officer.

**b. Materials and Subcontracts**

(1) Allowable costs of direct materials will be determined by the contracting officer in accordance with the Conduct Price/Cost Analysis topic of the Evaluate Proposals task of Process Step 2: Evaluate Sources of the Postal Service Supplying Practices in effect on the date of this contract. Reasonable and allocable material handling costs may be included in the charge for material to the extent they are clearly excluded from the hourly rate.

(2) The actual costs of subcontracts that are authorized under the Subcontracts clause of this contract are reimbursable; provided, they are consistent with subparagraph 3 following.

(3) To the extent possible, the supplier must:

(a) Obtain materials at the most advantageous prices available, with due regard to securing prompt delivery of satisfactory materials; and

(b) Take all available cash and trade discounts, rebates, allowances, credits, salvage, commissions, and other benefits. When unable to take advantage of the benefits, the supplier will promptly notify the contracting officer and give the reasons. Credit will be given to the Postal Service for cash and trade discounts, rebates, allowances, credits, salvage, the value of any appreciable scrap, commissions, and other amounts that have accrued to the benefit of the supplier, or would have accrued except for the fault or neglect of the supplier. The benefits lost without fault or neglect on the part of the supplier, or lost through no fault of the contracting officer, will not be deducted from gross costs.

c. Total Cost. It is estimated that the total cost for performing this contract will not exceed the ceiling price set forth in the Schedule, and the supplier agrees to use its best efforts to perform the work within this ceiling price. Whenever the supplier has reason to believe that the hourly rate payments and material costs that will accrue in performing the contract in the next 60 days, if added to all other payments and costs previously accrued, will exceed the ceiling price, the supplier must notify the contracting officer, giving any revised estimate of the total price for performing this contract, with supporting reasons and documentation. Whenever the supplier has reason to believe that the total price for this contract will be greater than or substantially less than the then stated ceiling price, the supplier must notify the contracting officer, giving a revised estimate of the total price for performing this contract, with supporting reasons and documentation. Whenever the Postal Service has reason to believe that the work required will be greater than or substantially less than the then stated ceiling price, the contracting officer will advise the supplier, giving a revised estimate of the total amount of effort to be required under the contract.

d. Ceiling Price. The Postal Service is not obligated to pay the supplier any amount in excess of the ceiling price in the Schedule, and the supplier is not obligated to continue performance if to do so would exceed the ceiling price, until the contracting officer notifies the supplier in writing that the ceiling price has been increased, specifying a revised ceiling price for performance under the contract. When the ceiling price is increased, any hours expended or material costs incurred in excess of the ceiling price before the increase will be allowable to the same extent as if expended or incurred afterwards.

e. Audit. At any time or times before final payment, the contracting officer may request audit of the invoices or vouchers and substantiating material. Each payment previously made will be subject to reduction to the extent of amounts, on preceding invoices or vouchers, that are found by the contracting officer not to have been properly payable and will also be subject to reduction for overpayments or to increase for underpayments. Upon receipt and approval of the voucher or invoice designated by the supplier as the completion voucher or completion invoice and substantiating material, and upon compliance by the supplier with any required release and all other terms of this contract, the Postal Service will promptly pay any balance due. The completion invoice or voucher, and substantiating material, must be submitted by the supplier as promptly as practicable following completion of the work under this contract, but in no event later than one year (or such longer period as the contracting officer may approve in writing) from the date of completion.

**CLAUSE 4-1 GENERAL TERMS AND CONDITIONS (JULY 2007)**

a. Inspection and Acceptance. The supplier will only tender for acceptance those items that conform to the

requirements of this contract. The Postal Service reserves the right to inspect or test supplies or services that have been tendered for acceptance. The Postal Service may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Postal Service must exercise its post acceptance rights (1) within a reasonable period of time after the defect was discovered or should have been discovered and (2) before any substantial change occurs in the condition of the items, unless the change is due to the defect in the item.

b. Assignment. If this contract provides for payments aggregating \$10,000 or more, claims for monies due or to become due from the Postal Service under it may be assigned to a bank, trust company, or other financing institution, including any federal lending agency, and may thereafter be further assigned and reassigned to any such institution. Any assignment or reassignment must cover all amounts payable and must not be made to more than one party, except that assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in financing this contract. No assignment or reassignment will be recognized as valid and binding upon the Postal Service unless a written notice of the assignment or reassignment, together with a true copy of the instrument of assignment, is filed with:

- (1) The contracting officer;
- (2) The surety or sureties upon any bond; and
- (3) The office, if any, designated to make payment, and the contracting officer has acknowledged the assignment in writing.

(4) Assignment of this contract or any interest in this contract other than in accordance with the provisions of this clause will be grounds for termination of the contract for default at the option of the Postal Service.

c. Changes

(1) The contracting officer may, in writing, without notice to any sureties, order changes within the general scope of this contract in the following:

- (a) Drawings, designs, or specifications when supplies to be furnished are to be specially manufactured for the Postal Service in accordance with them;
- (b) Statement of work or description of services;
- (c) Method of shipment or packing;
- (d) Places of delivery of supplies or performance of services;
- (e) Delivery or performance schedule;
- (f) Postal Service furnished property or facilities.

(2) Any other written or oral order (including direction, instruction, interpretation, or determination) from the contracting officer that causes a change will be treated as a change order under this paragraph, provided that the supplier gives the contracting officer written notice stating (a) the date, circumstances, and source of the order and (b) that the supplier regards the order as a change order.

(3) If any such change affects the cost of performance or the delivery schedule, the contract will be modified to effect an equitable adjustment.

(4) The supplier's claim for equitable adjustment must be asserted within 30 days of receiving a written change order. A later claim may be acted upon - but not after final payment under this contract - if the contracting officer decides that the facts justify such action.

(5) Failure to agree to any adjustment is a dispute under Clause B-9, Claims and Disputes, which is incorporated into this contract by reference (see paragraph s). Nothing in that clause excuses the supplier from proceeding with the contract as changed.

d. Reserved

e. Reserved

f. Reserved

g. Invoices

(1) The supplier's invoices must be submitted before payment can be made. The supplier agrees that submission of an invoice to the Postal Service for payment is a certification that:

(a) Any services being billed for have been performed in accordance with the contract requirements; and

(b) Any supplies for which the Postal Service is being billed have been shipped or delivered in accordance with the instructions issued by the contracting officer and that the supplies are in the quantity and of the quality designated in the contract.

(2) To ensure prompt payment, an original invoice (or electronic invoice, if authorized) must be submitted to the address designated in the contract to receive invoices for each destination and shipment. An invoice must contain:

(a) The supplier's name, remit to address (including ZIP+4) and phone number;

(b) Unique invoice number and invoice date;

(c) Any applicable task or delivery order number;

(d) A description of the supplies or services and the dates delivered or performed;

(e) The point of shipment or delivery;

(f) Quantity, unit of measure, unit price(s) and extension(s) of the items delivered;

(g) Shipping and payment terms, including GBL number if applicable; and

(h) Any additional information required by the contract.

h. Patent Indemnity. The supplier will indemnify the Postal Service and its officers, employees and agents against liability, including costs for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark, or copyright, arising out of the performance of this contract, provided the supplier is reasonably notified of such claims and proceedings.

i. Payment

(1) Payment will be made for items accepted by the Postal Service that have been delivered to the delivery destinations set forth in this contract. The Postal Service will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and 5 CFR 1315. Payments under this contract may be made by the Postal Service either by electronic funds transfer (EFT), check, or government credit card at the option of the Postal Service. When the EFT payment method is selected, the Postal Service will provide the supplier with Form 3881, Supplier's Electronic Funds Transfer Enrollment Form, at contract award. The supplier must complete the form and submit it to the designated Postal Accounting Service Center to ensure the proper routing of payments.

(2) In conjunction with any discount offered for early payment, time will be computed from the date of the invoice. For purposes of computing the discount earned, payment will be considered to have been made on the date which appears on the payment check or the date on which an electronic funds transfer was made.

j. Risk of Loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract will remain with the supplier until, and will pass to the Postal Service upon:

1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin, or;

2) Delivery of the supplies to the Postal Service at the destination specified in the contract, if transportation is f.o.b. destination.

k. Taxes. The contract price includes all applicable federal, state, and local taxes and duties.

l. Termination for the Postal Service's Convenience. The Postal Service reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the supplier must immediately stop all work and must immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the supplier will be paid a percentage of the work performed prior to the notice of termination, plus reasonable charges the supplier can demonstrate to the satisfaction of the Postal Service using its standard record keeping system, have resulted from the termination. The supplier will not be

paid for any work performed or costs incurred which reasonable could have been avoided.

m. **Termination for Default.** The Postal Service may terminate this contract, or any part hereof, for default by the supplier, or if the supplier fails to provide the Postal Service, upon request, with adequate assurances of future performance. In the event of termination for default, the Postal Service will not be liable to the supplier for any amount for supplies or services not accepted, and the supplier will be liable to the Postal Service for any and all rights and remedies provided by law. The debarment, suspension, or ineligibility of the supplier, its partners, officers, or principal owners under the Postal Service's procedures (see 39 CFR Part 601) may constitute an act of default under this contract, and such act will not be subject to notice and cure pursuant to any termination of default provision of this contract. If it is determined that the Postal Service improperly terminated this contract for default, such termination will be deemed a termination for convenience.

n. **Title.** Unless specified elsewhere in this contract, title to items furnished under this contract will pass to the Postal Service upon acceptance, regardless of when or where the Postal Service takes physical possession.

o. **Warranty.** The supplier warrants and implies that the items delivered under this contract are merchantable and fit for the use for the particular purpose described in this contract.

p. **Limitation of Liability.** Except as otherwise provided by an express or implied warranty, the supplier will not be liable to the Postal Service for consequential damages resulting from any defect or deficiencies in accepted items.

q. **Other Compliance Requirements.** The supplier will comply with all applicable Federal, State, and local laws, executive orders, rules and regulations applicable to its performance under this contract.

r. **Order of Precedence.** Any inconsistencies in this solicitation or contract will be resolved by giving precedence in the following order; (1) the schedule of supplies and services; (2) the Assignment, Disputes, Payments, Invoice, Other Compliances and Compliance with Laws Unique to the Postal Service Contracts paragraphs of this clause; (3) the clause at 4-2 Contract Terms and Conditions Required to Implement Policies, Statutes or Executive Orders; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) Form 8203; (8) other documents, exhibits, and attachments, and (9) the specifications.

s. **Incorporation by Reference.** Wherever in this solicitation or contract a standard provision or clause is incorporated by reference, the incorporated term is identified by its title, the provision or clause number assigned to it in the Postal Service Supplying Practices and its date. The text of incorporated terms may be found at <http://www.usps.com/purchasing/purchasingpubs/pubsmenu>. The following clauses are incorporated in this contract by reference:

- 1) B-1, Definitions (March 2006)
- 2) B-9, Claims and Disputes (March 2006)
- 3) B-15, Notice of Delay (March 2006)
- 4) B-16, Suspensions and Delays (March 2006)
- 5) B-19, Excusable Delays (March 2006)
- 6) B-30, Permits and Responsibilities (March 2006)

t. **Shipping.** The supplier must deliver goods that meet the prescribed physical limitations of the current U.S. Postal Service Domestic Mail Manual either by its own personnel/equipment or by use of the United States Postal Service, unless the contracting officer grants a waiver of this requirement. The supplier is responsible for ensuring that the packing and packaging are sufficient to protect the goods and ensure usability upon receipt.

#### CLAUSE 4-2 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT POLICIES, STATUTES OR EXECUTIVE ORDERS (MARCH 2006)

##### a. Incorporation by Reference

(1) Wherever in this solicitation or contract a standard provision or clause is incorporated by reference, the incorporated term is identified by its title, the provision or clause number assigned to it in the Postal Service

Supplying Practices. The text of incorporated terms may be found at <http://www.usps.com/purchasing/purchasingpubs/pubsmenu.htm>. The following clauses are incorporated in this contract by reference:

- (1) Clause 1-5, Gratuities or Gifts (March 2006)
- (2) Clause B-9, Claims and Disputes (March 2006)
- (3) Clause B-25, Advertising of Contract Awards (March 2006)
- (4) Clause 9-1, Convict Labor (March 2006)
- (5) Clause 9-5, Contract Work Hours and Safety Standards Act - Safety Standards (March 2006)
- (2) If checked, the following additional clauses are also incorporated in this contract by reference: (contracting officer will check as appropriate.)
- (1) ☒ Clause 1-1, Privacy Protection (July 2007)
- (2) ☐ Clause 1-6, Contingent Fees (March 2006)
- (3) ☐ Clause 1-9, Preference for Domestic Supplies (March 2006)
- (4) ☐ Clause 1-10, Preference for Domestic Construction Materials (March 2006)
- (5) ☐ Clause 3-1, Small, Minority, and Woman-owned Business Subcontracting Requirements (March 2006)
- (6) ☐ Clause 3-2, Participation of Small, Minority, and Woman-owned Businesses (March 2006)
- (7) ☐ Clause 9-2, Contract Work Hours and Safety Standards Act - Overtime Compensation (March 2006)
- (8) ☐ Clause 9-3, Davis-Bacon Act (March 2006)
- (9) ☐ Clause 9-6, Walsh-Healey Public Contracts Act (March 2006)
- (10) ☒ Clause 9-7, Equal Opportunity (March 2006)
- (11) ☐ Clause 9-10, Service Contract Act (March 2006)
- (12) ☐ Clause 9-11, Service Contract Act - Short Form (March 2006)
- (13) ☐ Clause 9-12, Fair Labor Standards Acts and Services Contract Act - Price Adjustments (March 2006)
- (14) ☒ Clause 9-13, Affirmative Action for Handicapped Workers (March 2006)
- (15) ☒ Clause 9-14, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (March 2006)

b. Examination of Records.

- (1) Records. "Records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.
- (2) Examination of Costs. If this is a cost-type contract, the supplier must maintain, and the Postal Service will have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination includes inspection at all reasonable times of the supplier's plants, or parts of them, engaged in the performance of this contract.
- (3) Cost or Pricing Data. If the supplier is required to submit cost or pricing data in connection with any pricing action relating to this contract, the Postal Service, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, will have the right to examine and audit all of the supplier's records, including computations and projections, related to:
  - (a) The proposal for the contract, subcontract, or modification;
  - (b) The discussions conducted on the proposal(s), including those related to negotiating;
  - (c) Pricing of the contract, subcontract, or modification; or
  - (d) Performance of the contract, subcontract or modification.
- (3) Reports. If the supplier is required to furnish cost, funding or performance reports, the contracting officer or any authorized representative of the Postal Service will have the right to examine and audit the supporting records and materials, for the purposes of evaluating:
  - (a) The effectiveness of the supplier's policies and procedures to produce data compatible with the objectives of these reports; and
  - (b) The data reported.
- (4) Availability. The supplier must maintain and make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a) through (d) of this clause, for examination, audit, or reproduction, until three years after final payment under this contract or any longer period required by statute or other clauses in this contract. In addition:
  - (a) If this contract is completely or partially terminated, the supplier must make available the records related to the work terminated until three years after any resulting final termination settlement; and
  - (b) The supplier must make available records relating to appeals under the claims and disputes clause or to

litigation or the settlement of claims arising under or related to this contract. Such records must be made available until such appeals, litigation or claims are finally resolved.

Note: (Note to contracting officers: Any contemplated changes to this paragraph (b.) may not be made before (1) consulting with assigned counsel and the Office of the Inspector General and (2) a deviation has been reviewed and approved by a higher level than the contracting officer who holds deviation approval authority.

#### CLAUSE 4-4 NONDISCLOSURE (PROFESSIONAL SERVICES) (MARCH 2006)

The supplier acknowledges that confidential information might be generated or made available during the course of performance of this agreement. In addition to the restrictions on disclosure established under the supplier's code of ethics, the supplier specifically agrees not to disclose any information received or generated under this contract, unless its release is approved in writing by the contracting officer. The supplier further agrees to assert any privilege allowed by law and to defend vigorously Postal Service rights to confidentiality.

#### CLAUSE 4-5 INSPECTION OF PROFESSIONAL SERVICES (MARCH 2006)

a. The contracting officer may, at any time or place, inspect the services performed and the products, including documents and reports. No matter what type of contract is employed, and in addition to any specific standards of quality set out in this agreement, the contracting officer may reject any services or products that do not meet the highest standards of professionalism. No payment will be due for any services or products rejected under this clause.

b. Acceptance of any product or service does not relieve the supplier of the duties imposed by supplier's code of professional ethics, and the supplier remains liable for the period allowed under federal law for claims by the United States, for any errors or omissions occurring during performance.

#### CLAUSE 4-6 INVOICES (PROFESSIONAL SERVICES) (MARCH 2006)

a. In addition to the information required elsewhere in this agreement, all invoices for services under this agreement must indicate in detail the following:

- (1) Person performing service each day by hour and part of an hour.
- (2) Services performed each day by hour and part of an hour.
- (3) Rates and charges for each service so detailed.
- (4) Individual expenses charged, if allowed under this agreement.

b. Minimum charges for portions of an hour may be allowed, if such a charging practice has been disclosed before award of this agreement.

#### CLAUSE 4-7 RECORDS OWNERSHIP (MARCH 2006)

Notwithstanding any state law providing for retention of rights in the records, the supplier agrees that the Postal Service may, at its option, demand and take without additional compensation all records relating to the services provided under this agreement. The supplier must turn over all such records upon request but may retain copies of documents produced by the supplier.

#### CLAUSE 4-8 KEY PERSONNEL (MARCH 2006)

a. To the extent that the statement of work provides for services to be performed by key personnel, those services must be performed by the personnel identified in the supplier's proposal to perform them unless substitutes have been approved in writing by the contracting officer. Use of junior personnel, even under key personnel supervision (for example, associates or student workers), is not authorized unless they are identified in the supplier's proposal by name or position, with a description of their duties.



b. This agreement may be terminated if the key personnel named in the supplier's proposal become unavailable for any reason. If the unavailability of key personnel is not the fault of the supplier, the contracting officer may terminate by giving notice of termination. The supplier will be paid for service performed up to the date of termination. If the contracting officer finds that the supplier is at fault for the unavailability of key personnel, the agreement may be terminated for default.

#### CLAUSE 4-19. APPLICATION INFORMATION SECURITY REQUIREMENTS (AUGUST 2008)

The Postal Service is committed to creating and maintaining an environment that protects Postal Service application systems from accidental or intentional unauthorized use, modification, disclosure, or destruction. Handbook AS-805, Information Security, establishes Postal Service information security policies. Handbook AS-805-A, Application Information Security Assurance (ISA) Process, provides the process for identifying the sensitivity and criticality of the application system, determining information security requirements for protecting the application system, and ensuring appropriate, cost-effective information security controls, mechanisms, and procedures are implemented to protect the application system. If the supplier has not already performed the following, it must, following contract award and before beginning contract performance:

Comply with the policies delineated in Handbook AS-805, Information Security, and processes defined in Handbook AS-805-A, Application Information Security Assurance (ISA) Process.

Cooperate with the Postal Service in completing the application Business Impact Assessment (BIA) to identify the sensitivity and criticality of the application and to determine the information security requirements.

Include and comply with the information security requirements generated by the BIA and included in the contract or agreement.

Coordinate ISA activities with the Postal Service's Corporate Information Security Office (CISO).

Complete ISA templates and provide applicable documentation and deliverables to the CISO.

Supplier(s) are responsible for mitigating all security vulnerabilities identified from site security reviews conducted by the Postal Service Inspection Service and CISO, or audits conducted by the Office of the Inspector General.

Postal Service data may not be stored outside of postal premises or placed onto laptops or other mobile media without the prior consent of the Contracting Officer. Requests to store Postal Service data on laptops or other mobile media are sent to the Contracting Officer. The Contracting Officer will coordinate such requests with the CISO.

#### CLAUSE 6-1 CONTRACTING OFFICER'S REPRESENTATIVE (MARCH 2006)

The contracting officer will appoint a contracting officer's representative (COR), responsible for the day-to-day administration of the contract, who will serve as the Postal Service's point of contact with the supplier on all routine matters. A copy of the notice of appointment defining the COR's authority will be furnished to the supplier upon award of the contract.

## PART 4 - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

## LISTING

Attachment No.	No of Pages	Attachment Title
1	2	SOW

## Expert Witness Statement of Work

### BACKGROUND

GameFly, Inc., a gaming DVD business with a business model similar to Netflix, has brought a legal complaint against the Postal Service at the Postal Regulatory Commission. GameFly accuses the Postal Service of systematically discriminating against small mailers in favor of Netflix (and, to a lesser extent, Blockbuster). The broader implications of GameFly's allegations are that the Postal Service gives a constellation of privileges to a rich, powerful mailer, and discriminates against the smaller mailers who do not have the same clout with postal management.

Specifically, GameFly alleges that automation equipment that is used by the Postal Service to process First-Class Mail (FCM) letters breaks the DVDs at an unacceptable level (mainly on the DVDs' return trips to the DVD distribution company, i.e., GameFly and Netflix). For Netflix, the effect of this breakage is minimized because, either tacitly or by explicit commitment, the Postal Service processes Netflix's DVDs manually, primarily by culling the return mail from the mailstream, so that it is not processed on machines. GameFly alleges that the Postal Service refuses to afford this manual processing to small, less influential mailers like GameFly and, as a consequence, GameFly must mail at First-Class Mail flat rates to avoid letter automation machinery (Flats automation does not break as many DVDs as letter processing.). Also, GameFly contends that it must reinforce its packaging with an insert that causes the weight of its piece to exceed one ounce. This drives up the postage cost.

A major issue related to this matter concerns differences among DVDs, including gaming and movie DVDs, as well as practices undertaken by DVD mailers to reduce breakage to DVDs and damage to Postal Service machines resulting from automated processing. In interrogatories and pleadings, GameFly has alleged that all DVDs are the same and have the same vulnerability to breakage through automated processing. GameFly concedes that it has not conducted any research to support these statements, and cites a Wikipedia article as evidence of DVD equality. (<http://en.wikipedia.org/wiki/DVD>). The Postal Service understands that GameFly's statements on this subject are inaccurate, and that certain factors, including DVD coating and material, influence the likelihood of breakage and damage to Postal Service machines.

### REQUESTED SERVICES

The contractor, Rob Lundahl of ATR, will provide expert witness services, including consultative analysis, support and testimony, to the Postal Service as needed on current and widely accepted automated systems and machines engineering methods, standards and practices.

### COST

The services and support will be provided on a time and materials basis with a retainer fee up front.

Rob Lundahl is domiciled locally within the Washington, DC metropolitan area; thus, expenses associated with any domestic travel will be minimal. The cost of both labor and travel are provided below.

#### LABOR

- Expert Witness \$ [REDACTED] per hour

#### TRAVEL

Travel cost will consist of two items. Travel time and travel expenses.

Travel time will be billed at the stated labor rates; however, a discounted rate equivalent to 2/3 the labor rate will be applied to travel time in excess of four hours on any one day.

Travel expenses will be billed as per actual expenses with the exception of meals and incidentals which will be billed as per the General Service Administration (GSA) per diem rates. All travel costs incurred in support of this task must be in accordance with Postal Service Handbook F15 – Travel and Relocation.

#### **INVOICING**

ATR will invoice the USPS on a monthly basis. The USPS agrees to pay invoices within 30 days of the invoice date.

#### **SCHEDULE**

The services will be provided on as-per-required basis with the first need for support to begin immediately upon issuance of the contract to prepare for written direct testimony due on July 7, 2010.

#### **POSTAL SERVICE INFORMATION AND DATA**

Rob Lundahl of ATR will not have access to any United States Postal Service networks, systems or sensitive data.

#### **TRANSMISSION OF INFORMATION RESOURCES**

Not applicable. No transmission of sensitive data will occur under this contract between the Postal Service and Rob Lundahl.

#### **PERSONNEL – SUPPLIER CLEARANCE REQUIREMENTS**

Not Applicable.

**APPOINTMENT/DESIGNATION OF CONTRACTING OFFICER'S REPRESENTATIVE**

Contract No: 2DLGMR-10-B-0007

Purchasing & Supply Mgt. Specialist: Jo Clemmer (901-747-7563)

Contractor: ADVANCED TECHNOLOGY & RESEARCH

For the purpose of representing the Contracting Officer in administering the above contract, BRANDY OSIMOKUN is hereby designated as the Contracting Officer's Representative (COR).

The COR is delegated authority and responsibility to perform duties as follows:

1. Assure that the contractor performs in accordance with the terms, conditions and specifications of the contract.
2. Furnish technical assistance and guidance to the contractor. Copies of correspondence between COR and supplier will be sent to the Contracting Officer, as necessary, for inclusion in the contract file.
3. Advise the Contracting Officer of any changes needed to the contract.
4. Advise the Contracting Officer by written report immediately of any unsatisfactory performance.
5. Review Contractor's invoices for accuracy and to verify invoice payment amount.

The COR is not delegated authority, except as stated above, to approve, disapprove or direct the supplier to take any actions that would commit the U. S. Postal Service contractually. Only the Contracting Officer may authorize changes to the contract.

The above COR selection and designation are executed in accordance with the Supplying Practices and Principles, and shall remain in effect throughout the life of this contract unless revoked by the Contracting Officer or his successor.

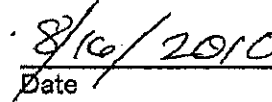
  
Jo Clemmer, Contracting Officer

  
Date

I have completed the Web-Based Training course 34Q01-08, "Contracting Officer's Representative Training", and reviewed the "Supplemental Standards of Ethical Conduct for Employees of the United States Postal Service", [http://blue.usps.gov/purchase/pdf/smo\\_ethicssupplement.pdf](http://blue.usps.gov/purchase/pdf/smo_ethicssupplement.pdf).

I will abide by all requirements addressed in the training in conducting my responsibilities as Contracting Officer Representative.

  
BRANDY OSIMOKUN, COR

  
Date

**ADVANCED TECHNOLOGY & RESEARCH**  
**BUSINESS CASE**  
**DETERMINATION OF BEST VALUE**  
**(Supplier Past Performance &/or Supplier Capability)**  
**And**  
**DETERMINATION OF FAIR AND REASONABLE PRICE**  
**SUBJECT: PRC HEARING: ALLEGATION OF MAILER DISCRIMINATION**  
**07/18/2010**

GameFly has alleged that automation equipment used by USPS to process First-Class Mail breaks the DVDs at an unacceptable level (mainly on the DVDs' return trips to the DVD distribution company, i.e., GameFly and Netflix). For Netflix, the effect of this breakage is minimized because, either tacitly or by explicit commitment, the Postal Service processes Netflix's DVDs manually, primarily by culling the return mail from the mail stream, so that it is not processed on machines. GameFly has alleged that the USPS refuses to afford this manual processing to small, less influential mailers like GameFly and, as a consequence, GameFly must mail at First-Class Mail flat rates to avoid letter automation machinery (Flats automation does not break as many DVDs as letter processing.). Also, GameFly contends that it must reinforce its packaging with an insert that causes the weight of its piece to exceed one ounce. This drives up the postage cost.

A major issue related to this allegation concerns differences among DVDs, including gaming and movie DVDs, as well as practices undertaken by DVD mailers to reduce breakage of DVDs and damage to USPS machines. In interrogatories and pleadings, GameFly has alleged that all DVDs are the same and have the same vulnerability to breakage through automated processing. GameFly concedes that it has not conducted any research to support these statements, and cites a Wikipedia article as evidence of DVD equality. (<http://en.wikipedia.org/wiki/DVD>). The USPS contends that GameFly's statements on this subject are inaccurate, and that certain factors, including DVD coating and material, influence the likelihood of breakage and damage to Postal Service machines.

ADVANCED TECHNOLOGY & RESEARCH is an engineering consulting firm that has provided valuable services to the Postal Service for many years. ADVANCED TECHNOLOGY & RESEARCH has a wealth of knowledge and a unique understanding of postal operations, and has a demonstrated history of providing technical solutions and support. More importantly, as it pertains to the PRC hearing, ADVANCED TECHNOLOGY & RESEARCH has professionals on staff that can provide subject matter expertise to support the USPS.

Rob Lundahl, Advanced Technology & Research, will provide expert witness services, including consultative analysis, support and testimony, for the USPS as needed on current and widely accepted automated systems and machines engineering methods.

standards and practices. ADVANCED TECHNOLOGY & RESEARCH is the only company and Rob Lundahl is the only supplier capable of supporting the USPS at this hearing during the timelines imposed by the PRC.

A cost/price comparison was performed between recent USPS expert witnesses, which demonstrated that ADVANCED TECHNOLOGY & RESEARCH is providing subject matter expert testimony at a lower hourly rate. ADVANCED TECHNOLOGY & RESEARCH is 23% less than Planmatics and 28% less than LASSC.

#### EXPERT WITNESS RATES

	ADVANCED TECHNOLOGY RESEARCH	PLANMATICS	LASSC
RATE PER HOUR			

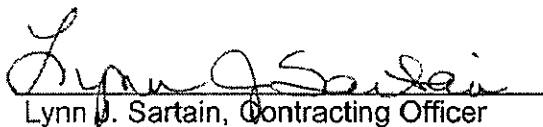
ADVANCED TECHNOLOGY & RESEARCH has a proven record. The firm has provided technical assistance to the USPS for many years and has earned the trust of USPS officials.

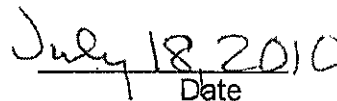
The Excluded Parties List System maintained by GSA was accessed as was the Postal Service List of Debarred, Suspended and Ineligible suppliers. ADVANCED TECHNOLOGY & RESEARCH was not found on either list.

Therefore, based on the above, the determination has been made to non-competitively award contract 2DLGMR-10-B-0007 to ADVANCED TECHNOLOGY & RESEARCH. Based on supplier capability and a fair and reasonable price, ADVANCED TECHNOLOGY & RESEARCH offers the best value to the Postal Service.

  
Jo Clemmer, Purchasing & SM Specialist

  
Date

  
Lynn J. Sartain, Contracting Officer

  
Date

READ INSTRUCTIONS ON NEXT PAGE

Page 1 of 1

REQUISITION				PROCUREMENT REQUEST NO 10382839	
1. NAME, PHONE NUMBER, AND ROUTING SYMBOL OF PERSON TO CONTACT SARAH JOHNSON/2022662972				REQUISITION DATE 06/29/2010	
3. ORIGINATING OFFICE DATA GEN COUNSEL LAW DEPT BUS SVC				2. TYPE OF REQUEST (Check one) A. <input checked="" type="checkbox"/> NEW REQUEST	
4. ADDITIONAL INFORMATION (Suggested supply sources, security data, etc.) ADVANCED TECHNOLOGY & - 520977059EA00001				B. <input type="checkbox"/> CHANGE TO PENDING PR NO.  C. <input type="checkbox"/> MODIFICATION TO CONTRACT OR ORDER NO.	
5. APPROVALS					
APPROVING OFFICIALS (A)	ROUTING SYMBOL (B)	DATE (C)	INTERNAL ROUTING		
			INITIALS (D)	ROUTING SYMBOL (E)	
(1) AUTHORIZED REQUISITIONER SARAH JOHNSON	2A				
(2)					
(3)					
(4)					
6. CONSIGNEE AND DESTINATION					
GEN COUNSEL LAW DEPT BUS SVC GEN COUNSEL LAW DEPT BUS SVC USPS 475 LENFANT PLZ SW RM 6027 WASHINGTON DC 202606027					
7. DATE(S) REQUIRED 06/29/2010					
8. GOVERNMENT FURNISHED PROPERTY YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> (If "yes," see part 8 of instructions on next page.)					
9. DESCRIPTION OF ITEMS OR SERVICES					
ITEM NO. (A)	ITEM OR SERVICE (Include Specifications and Special Instructions) (B)	QUANTITY (C)	UNIT (D)	ESTIMATED COST	
				UNIT (E)	AMOUNT (F)
09001	BFN: 106412  1050265 Advanced Technology and Research Corporation - legal services Account Number: 52322	1	EA		
2012-10-B-007					
				TOTAL ESTIMATED COST \$ [REDACTED]	
10. ACCOUNTING DATA					
Accounting Info : 106412					





## Sill To Location

DC  
202606027  
106412  
PERFORMANCE FIELD OPERATI  
PERFORMNC/FLD OPNS SU - 210 - 6P  
DPMG & CHIEF OPERATI

## Date Due

06/29/2010

## Date Created

06/29/2010

**Ship Via**

Standard

## Order Type

EXPENSE

### Purchasing Method

CAMS

**CAMS Group**

Eastern Service CMC Memphis/Windsor

**Estimated supplier tax**

0.00

**Estimated supplier shipping/handling cost**

0.30

### Delivery Instructions

PO Attachment(s)

Add a PO attachment to this Request 

**Internal Attachment(s)**

ATR SS Justification.doc

### Justification

The purpose of this modification is to establish a new contract with Advanced Technology & Research Corporation ("ATR"). ATR will provide automated systems and machines engineering knowledge and expertise to assist USPS Systems Engineering with testimonial support during a complaint case. Also, please add \$50,000.00 to cover future invoices.

### Related POs

1. **USP000456075** placed on 06/30/2010

## Preview POs

1. **USP000456075** placed on 06/30/2010

### Related RFOs

<input type="checkbox"/> Keep requisition price and vendor	<input type="checkbox"/> Add items to shopping cart	<input type="checkbox"/> Add to cart	<input type="checkbox"/> Add to cart
--	---	--------------------------------------	--------------------------------------

**EBuy2**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-4.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to DVDs; damage to mail from processing it on AFCS, DBCS or other automated letter processing equipment; damage to polycarbonate or other plastic objects from material fatigue or mechanical impact; videogame disk composition; videogame production processes.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to NETFLIX. All studies, analysis, reports, and ATR generated documents are NETFLIX proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-5.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to DVDs.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-6.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to mail from processing it on AFCS, DBCS or other automated letter processing equipment.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-7.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to polycarbonate or other plastic objects from material fatigue or mechanical impact.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-8.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning videogame disk composition.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement. ATR did not conduct any studies specific to video game disc technology.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-9.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning videogame production processes.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement. ATR visited two replication facilities and saw how the DVDs and Blu-Ray DVDs were manufactured. ATR was not provided documentation specific to their production process and did not review any information specific to the production of video game discs.



RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
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**GFL/USPS-T4-10.** Please list the previous cases in which you have provided expert testimony. For each case, identify the case name, court or agency, docket number, the date on which your written testimony or expert report was submitted, and the date on which you testified orally. If your testimony has been recorded in a document, please produce it.

**RESPONSE:**

None.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
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**GFL/USPS-T4-11.** Have you ever had a discussion with any employee of GameFly? If so, please identify the employee(s), and the date, location and substance of the discussion.

**RESPONSE:**

No.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-12.** This question concerns pages 3-11 of your testimony (USPS-T-4), where you discuss a number of factors that you contend affect the rate of DVD breakage. Please produce all studies, analyses, compilations of data, and other information quantifying the effect of each such factor on the rate of DVD breakage.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

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**GFL/USPS-T4-13.** This question concerns pages 11-14 of your testimony (USPS-T-4), where you discuss various methods of reducing damage to DVDs from Postal Service equipment. Please produce all studies, analyses, compilations of data, and other information on the effectiveness of each such method in reducing damage to DVDs.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
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**GFL/USPS-T4-14.** Do you contend that DVDs designed, manufactured, handled and mailed in compliance with the standards and practices recommended on pages 3-14 of your testimony (USPS-T-4) would suffer no greater rates of breakage from automated letter processing than from manual processing? If your answer is anything but an unqualified no, please produce all studies, analyses, compilations of data, and other documents that support your position.

**RESPONSE:**

No.

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**GFL/USPS-T4-15.** By how much would adherence to the standards and procedures recommended on pages 3-14 of your testimony (USPS-T-4) lessen the DVD breakage that results from automated letter processing vis-à-vis manual processing? Please produce all studies, analyses, compilations of data, and other documents on which you rely.

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
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**GFL/USPS-T4-16.** Please produce all studies, analyses, compilations of data, and other information quantifying the effect of manual vs. automated letter processing on the breakage rates of DVDs that have been designed, manufactured, handled and mailed in compliance with the recommendations on pages 3-14 of your testimony (USPS-T-4).

**RESPONSE:**

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

ATR has performed tests and analysis on an experimental basis only. ATR was not involved in the actual implementation of any remedial actions. ATR does not know what remedial actions have ever been implemented by Netflix.

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**GFL/USPS-T4-20.** On page 2, lines 1-2, of your testimony (USPS-T-4), you state: "However, all DVDs are not equal. A more fatigue-resistant DVD will not be affected the same.[]" The second sentence seems to be missing one or more words. Did you mean "A more fatigue-resistant DVD will not be affected to the same extent as a less fatigue-resistant DVD," or other words to the same effect?

**RESPONSE:**

The second sentence is not missing any words. Yet the meaning of the second sentence cited above is also communicated by, "A more fatigue-resistant DVD will not be affected in the same way as a less fatigue-resistant DVD."

Perhaps I could say it more clearly by example. Different DVDs can have very different mechanical properties such as tensile strength of the polycarbonate material or different surface finishes of the cut hole on their inside diameter. Two DVDs could go through the same mechanical path through a sorter and be subjected to the same degree of twists and bends. However, the stronger DVD or the one with the better hole cut would accumulate less damage on each particular cycle. We would call that disc a more fatigue resistant disc and it would generally have a longer service life through repetitive runs through the sorter equipment experience with each rental cycle.



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**GFL/USPS-T4-21.** On page 2, lines 3-6, of your testimony (USPS-T-4), you state that "the types of DVDs mailed by GameFly and the methods Gamefly uses to mail those DVDs may make the DVDs shipped by Gamefly more susceptible to damage than the DVDs shipped by Netflix, and perhaps by other mailers."

(a) Why did you use the qualifier "may" instead of just omitting it or use the word "do" instead?

(b) Is the quoted statement, stripped of the qualifier "may," a correct statement? Please explain fully any answer other than an unqualified yes.

(c) Please produce all studies, analyses, compilations of data, and other information quantifying the relative susceptibility to damage of "DVDs mailed by GameFly" versus "DVDs shipped by Netflix."

(d) Please produce all studies, analyses, compilations of data, and other information quantifying the relative susceptibility to damage of "DVDs mailed by GameFly" versus DVDs shipped by other DVD rental companies.

(e) Please produce all studies, analyses, compilations of data, and other information quantifying the relative susceptibility to damage of DVDs mailed with GameFly's shipping methods versus DVDs mailed with the shipping methods of Netflix.

(f) Please produce all studies, analyses, compilations of data, and other information quantifying the relative susceptibility to damage of DVDs mailed with GameFly's shipping methods versus DVDs mailed with the shipping methods of other DVD rental companies.

**RESPONSE:**

(a) My knowledge of the characteristics of GameFly DVDs and GameFly's mailing methods is limited to the information in GameFly's responses to discovery requests.

(b) No, because my knowledge of the characteristics of GameFly DVDs and GameFly's mailing methods is limited to my review of GameFly's responses to discovery requests.

(c) ATR has not performed any study of GameFly DVDs.

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- (d) ATR has not performed any study of GameFly DVDs.
- (e) ATR has not performed any study of GameFly DVDs.
- (f) ATR has not performed any study of GameFly DVDs.

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**GFL/USPS-T4-23.** On page 3, line 20, of your testimony (USPS-T-4), you state:  
[“]More recently, my firm was retained by Netflix to analyze DVD breakage.”

\*\*\*\*\*

(e) When did the Postal Service become aware that your firm had been retained by Netflix to analyze DVD breakage?

\*\*\*\*\*

(g) Was any of the testing of materials for this study performed on equipment owned by the Postal Service? If so, please provide complete details.

**RESPONSE:**

\*\*\*\*\*

(e) Postal Service Engineering employees were aware before the filing of GameFly's complaint that Advanced Technology and Research Corporation had performed some analysis related to DVD breakage. On June 14, 2010, counsel for the Postal Service also became aware that Advanced Technology and Research Corporation had been retained by Netflix.

\*\*\*\*\*

(g) Yes. ATR conducted several tests on DBCS machines at Postal Service facilities in Merrifield, Virginia. ATR coordinated with Postal Service employee Chris Stratton, USPS Engineering, Letter Mail Technology, to gain access to the DBCS machines and run them with several different configurations on different sortation paths.

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**GFL/USPS-T4-24.** During the period when you were analyzing DVD breakage for Netflix, did your firm have any contracts with the Postal Service for analysis of DVD breakage? If so, please produce them.

**RESPONSE:**

No.

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**GFL/USPS-T4-25.** For any tasks or work related to DVD breakage that your firm has performed for the Postal Service, please provide the scope of work and the period of performance, and produce copies of any written deliverables.

**RESPONSE:**

ATR has not performed tasks related to DVD breakage for the Postal Service.

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**GFL/USPS-T4-26.** Please list all the contracts your firm has had with the Postal Service, the period of performance for each, whether or not the contract was competitively bid, and the amount of money your firm has invoiced and has collected.

**RESPONSE:**

This is ATR proprietary information and is not available for disclosure from ATR.

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**GFL/USPS-T4-27.** If you have ever participated in any study of DVD breakage for any client other than the Postal Service or Netflix, please provide the following information for each study:

- (a) The scope of the study.
- (b) The period of performance.
- (c) The name of the client(s).
- (d) Any reports, briefings and analyses delivered to the client.
- (e) Any workpapers underlying the documents responsive to part (d).

**RESPONSE:**

(a-e) ATR has not performed DVD-related breakage tasks for anyone other than Netflix.

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**GFL/USPS-T4-29.** On page 6, lines 16 and 17 of your testimony (USPS-T-4), you say "A clearer inside diameter hole results in more durability, reduced damage, and more accurate playing." Please provide the basis of this assertion, including any quantitative analysis which supports the assertion, the data underlying the analysis, the analysis plan, the results of the analysis, and the report(s) setting forth the results.

**RESPONSE:**

It is generally understood in failure analysis that surface defects act as stress concentrations when the part is under load. Cracks tend to form at stress concentrations and continued fatigue loading will encourage these cracks to propagate to the point of failure. ATR looked carefully at the quality of the ID on the DVDs since this is where the cracks formed that eventually led to the majority of the disc failures. The quality of the cut hole became a subject of concern and ATR performed several tests to evaluate the effect of a new cutter as compared with an older and presumably duller cutter. The test results indicated that there was a correlation. Newer and sharper cutters contributed to a longer fatigue life. All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.



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**GFL/USPS-T4-30.** On page 6, line 21-22, of your testimony (USPS-T-4), you state that "it was evident that the center hole was a major concentration of stresses." Do you mean that the area of the disk *surrounding* the center hole was a major concentration of stresses?

**RESPONSE:**

The hole itself is a stress concentration. The disc material adjoining the hole is under the greatest stress when the disc is being flexed.

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**GFL/USPS-T4-31.** On pages 7-8 of your testimony (USPS-T-4), you state with respect to UV curing that:

Testing results were difficult to validate with the number of parameters that cannot be controlled. However, the damage to plastics caused by UV exposure is commonly understood, and Netflix also understood the likely ramification from too much UV exposure. Netflix reviewed its printing techniques and the exposure levels at all steps of the fabrication process. (See appendix ATR 4 for a summary chart of the improved printing techniques.)

(a) Please identify and produce the referenced testing results, along with the underlying study design, data and workpapers.

(b) Please identify each of the referenced "parameters" and state whether it was controlled in the testing.

(c) What is the underlying chemical or physical mechanism that you contend causes UV exposure to make DVDs more brittle?

(d) Please produce copies of treatises or journal articles supporting your answer to part (c).

**RESPONSE:**

(a) ATR attempted to isolate the ultraviolet exposure effects by looking at different printing techniques. The screen printing process requires an ultraviolet cure cycle between each color layer. As a result, a one color print has fewer ultraviolet cure cycles than a five color printed label.

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(b) Other "parameters" include the manufacturer of the disc, the material used, the cutter used, and the time of disc manufacture. These variables could not be controlled in the test sample and that is why the test results should be interpreted with caution.

(c) It is my understanding that, fundamentally, ultraviolet radiation breaks down the bonds in the polymer chain and weakens the overall structure. However, this is a complex process and best described by a chemist or materials scientist. The effects of ultraviolet exposure on plastics are experienced by practically anyone who uses or maintains outdoor equipment such as boats, swimming pools or lawn furniture.

(d) I am providing a representative article on the subject for reference only. It is not the guiding document in our evaluation. Please see FUNDAMENTAL PROCESSES IN THE UV DEGRADATION AND STABILIZATION OF POLYMERS, J.E. Guillet, Department of Chemistry, University of Toronto, Canada.

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**GFL/USPS-T4-32.** This question concerns the following statement on page 7 of your testimony (USPS-T-4):

DVDs undergo a wide range of ultraviolet (UV) curing. A greater amount of UV curing causes a DVD to be more brittle and more susceptible to damage because exposure to UV radiation changes the mechanical properties of polycarbonate materials and makes them more brittle and susceptible to fatigue.[]

(a) Please confirm that the phrase "more brittle and more susceptible to damage" appears before the word "before" in the second sentence.

(b) Please confirm that the phrase "more brittle and susceptible to fatigue" appears after the word "before."

(c) Please confirm that the sentence as written is tautological.

(d) Please provide a non-tautological explanation of why, in your view, a "greater amount of UV curing causes a DVD to be more brittle and more susceptible to damage."

(e) Please specify the function (including coefficients) that best describes the relationship between increased exposure to UV and decreased flexibility of DVDs?

(f) Please produce all data, studies and analyses that you rely on in support of the relationship identified in response to part (e).

**RESPONSE:**

(a) Consultation with GameFly counsel clarified that the word "because" should replace the word "before" in this discovery request. Confirmed.

(b) Consultation with GameFly counsel clarified that the word "because" should replace the word "before" in this discovery request. Confirmed.

(c) Not confirmed.

(d) This goes back to the basic principal that polymers such as polycarbonate lose their mechanical properties when exposed to ultraviolet radiation. DVDs are made from polycarbonate. The mechanical strength of polycarbonate material can be degraded by ultraviolet exposure, therefore a DVD as a polycarbonate structure becomes weaker and more prone to failure after ultraviolet exposure.

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(e) Exposure to ultraviolet radiation does not decrease the flexibility of the DVDs. It decreases the mechanical properties of the base material making it more prone to fail and form cracks than a similarly flexed DVD of better mechanical strength.

(f) As discussed earlier, ATR attempted to validate this behavior based on testing several different DVDs that had been subjected to different printing processes. ATR felt that these test results were inconclusive based on the other variables that could not be adequately controlled for the test population. However, ATR also felt that ultraviolet degradation of plastics is a generally accepted phenomenon and excessive ultraviolet exposure should be avoided.

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**GFL/USPS-T4-34.** You state on page 11, lines 2-3, of your testimony (USPS-T-4) that "It is my understanding that the Postal Service has made modifications to resolve these issues."

- (a) What is the basis of your understanding?
- (b) What were the modifications?
- (c) What types of equipment had modifications?

**RESPONSE:**

- (a) My understanding is based on verbal feedback from Netflix.
- (b) The modifications consisted of a proper adjustment of the finger guards on the DBCS machines.
- (c) DBCS machines.

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**GFL/USPS-T4-34.** You state on page 11, lines 2-3, of your testimony (USPS-T-4) that "It is my understanding that the Postal Service has made modifications to resolve these issues."

\*\*\*\*\*

(d) For each type of equipment, what percentage of the universe received the modifications, and what percentage is still unmodified?

(e) Please specify the reduction in breakage rate provided by each modification.

(f) Please produce documents sufficient to verify your responses to the previous parts of this question.

**RESPONSE:**

\*\*\*\*\*

(d) The completion of the Modification Work Order is 97.4%.

(e) It is my understanding that the Postal Service has not tracked breakage rates associated with these modifications.

(f) Please see Appendix-GFL/USPS-T4-34(f).

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**GFL/USPS-T4-35.** On page 11, lines 15-17, of your testimony (USPS-T-4), you state that "Many mailers have taken actions to reduce or even avoid the risks of damage described above without changing the type of mail processing they receive."

\*\*\*\*\*

(e) Please produce documents sufficient to verify your answers to the previous parts of this question.

**RESPONSE:**

(e) The reinforcement rings are sold on the internet and I see them occasionally on DVDs that I personally receive from Netflix.



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**GFL/USPS-T4-37.** On page 11, lines 24-25, of your testimony (USPS-T-4), you state: "ATR evaluated the use of reinforcement rings with an FEM study and later with actual destructive testing."

\*\*\*\*\*

- (b) What was the period of performance?
- (c) Please produce the documents that defined the scope of the study or studies.
- (d) Please produce the report of the results of the study or studies, the study plan(s), the underlying data, and any analysis methods.
- (e) Whose equipment was used for the destructive testing?

**RESPONSE:**

- (b) These tests were performed in or about April of 2007.
- (c) All work that ATR performed concerning the failure analysis of DVDs was performed under contract to NETFLIX. All studies, analysis, reports, and ATR generated documents are NETFLIX proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.
- (d) All work that ATR performed concerning the failure analysis of DVDs was performed under contract to NETFLIX. All studies, analysis, reports, and ATR generated documents are NETFLIX proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.
- (e) ATR designed and built two specialized test devices to fatigue test DVDs to destruction. These devices were called the "locomotive" and the "Hoop" stress

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machine based on their operating characteristics. ATR also used an ABB robot to apply hoop stress loading at different flexing rates.

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**GFL/USPS-T4-38.** This question concerns the discussion of "DVD handling" on page 12, lines 4-17, of your testimony (USPS-T-4).

(a) What handling method(s) do you understand that GameFly uses for its DVDs? What is your basis for this understanding?

(b) Have you performed any FEM or destructive testing analysis on GameFly's DVDs? If so, please produce the test data and results.

(c) Do you have any information about the techniques GameFly uses to protect the quality of the inside diameter of its DVDs?

(d) If so, please provide the information and identify its source.

**RESPONSE:**

(a) My understanding is that GameFly's processing methods are essentially manual.

(b) I have tested a wide variety of DVDs from various manufacturers. While, to the best of my knowledge, none of them were then owned by GameFly, the testing was sufficiently broad that I am comfortable with the statements made in my testimony.

(c) Yes.

(d) A review of GameFly's responses to discovery requests indicates that GameFly takes no action to protect the quality of the inside diameter of its DVDs. These responses, including USPS/GFL-31, 32 and 98, reflect GameFly's general ignorance of the composition of DVDs and differences among DVDs. This general ignorance is reinforced by the statements made by David Hodess, the CEO of GameFly, during oral cross-examination. For example, on page 889 of Volume V of the transcript (July 28, 2010), Mr. Hodess explains that GameFly was not aware of and did not consider modifications to its DVDs as a method of

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reducing breakage, and this would include modifications to protect the quality of the inside diameter. And on page 892, Mr. Hodess states that he has no knowledge about the industry standard for DVDs or the composition of DVDs.

GameFly's responses to discovery requests demonstrate that GameFly may unknowingly take actions that increase the likelihood of damage to the inside diameter of its DVDs. In its response to USPS/GFL-88(c)-(d), GameFly states that it removes its DVDs from "a plastic DVD-type case with instructions and artwork." It is my understanding that this "plastic DVD-type case" is a jewel case. Removing a DVD from a jewel case can increase the likelihood of damage to the inside diameter of a DVD.

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**GFL/USPS-T4-39.** On page 12, lines 12-15, of your testimony (USPS-T-4), you state: "ATR...recommended that these spindles be inspected and the manufacturing process should avoid excessive handling by the inside diameter or the use of jewel cases."

\*\*\*\*\*

(c) Please specify in quantitative terms how much handling is excessive?

(d) On what data is your answer to part (c) based? Please produce the data and any studies or reports from the data were obtained[sic].

(e) Please explain the relationship between damage to DVDs and the use of jewel cases, and produce all studies, analyses and data on which your response is based.

(f) Do you contend that GameFly uses jewel cases for shipping or storing its DVDs? If your answer is anything but an unqualified no, please produce the information on which the answer is based.

**RESPONSE:**

\*\*\*\*\*

(c) This is difficult or impossible to quantify. It is a cumulative fatigue problem so it is more useful to say that less handling is better.

(d) All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

(e) Most jewel cases have some sort of central feature that captures the DVD by its inside diameter. Removing and replacing the DVD over these features can possibly damage the inside diameter of the DVD with small scratches causing

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stress concentrations where the stress is highest when the DVD is bent or flexed.

Stress concentrations will accelerate crack formation and reduce the fatigue life of the DVD.

All work that ATR performed concerning the failure analysis of DVDs was performed under contract to Netflix. All studies, analysis, reports, and ATR generated documents are Netflix proprietary information and cannot be disclosed without written authorization under the terms of our confidentiality agreement.

(f) Gamefly's DVDs arrive in jewel cases from the manufacturer. Please see the response to GFL/USPS-T4-38(d).

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**GFL/USPS-T4-40.** On page 13, lines 10-12, of your testimony (USPS-T-4), you state, "Netflix has succeeded in reducing the amount of handling by developing automated internal handling processing and requiring minimal handling of its DVDs within the Postal Service processing network."

(a) Please describe the specific methods of "automated internal handling processing" used by Netflix.

(b) When did Netflix implement the methods identified in response to part (a)?

(c) What is the incremental amount of DVD breakage that Netflix avoids by using the methods identified in response to part (a)?

(d) Please identify the information on which you rely to answer parts (a) through (c). If the information is recorded in documents, please produce copies.

**RESPONSE:**

(a) Netflix understands the relationship between increasing the fatigue life of DVDs by reducing the number of stress cycles from material handling and sortation equipment and took steps to minimize these stress cycles in their internal sorting operations.

The specific details of their internal material handling operations are proprietary and cannot be disclosed without written authorization.

(b) I have no knowledge of the issue.

(c) I have no knowledge of the issue.

(d) There is no documentation available from ATR.

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LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-43.** On page 15 of your testimony (USPS-T-4), you state:

As explained above, Netflix and other DVD mailers mail DVDs with inherent characteristics that make DVDs more durable. They also take other actions that make their DVDs less vulnerable to damage, including the use of reinforcement rings, maintaining good cutters, maintaining spindle quality, and limiting the handling of their DVDs. GameFly mails DVDs that may be more susceptible to damage, since it does not take affirmative action to make its DVDs more fatigue resistant. GameFly appears to lack basic knowledge about DVDs, why they fail, and how to increase their fatigue life.

On page 17 of USPS-T-2, USPS witness Belair states: "Yes, I would say that low damage rates are common knowledge. Rates around one percent have been reported recently by Netflix, and more recently by GameFly."

(a) Please reconcile the two quoted statements.

(b) Would Netflix continue to experience breakage rates "around one percent" if the company continued to follow the practices that you praise in the quoted passage, but the Postal Service processed Netflix return mailers predominantly on automated letter processing equipment?

(c) Please provide all studies, analyses, compilations of data, and other information on which your answer to part (b) relies.

**RESPONSE:**

(a) No reconciliation is needed or appropriate. GameFly purchases flats service and handling for its DVDs, and Netflix and other DVD mailers purchase letter service and handling. The breakage rates experienced by mail pieces that receive different types of processing may not be an "apples to apples" comparison. If GameFly took the measures that Netflix does to improve the longevity of its DVDs, I am quite confident that the former would see a distinct drop in breakage.

(b) The Postal Service and the witness are not aware of any studies that would enable me to answer this question.

(c) Please see the response to GFL/USPS-T4-43(b).



1 MR. HOLLIES: Thank you, Commissioner. I  
2 don't believe you directed me to do the same with the  
3 direct testimony.

4 COMMISSIONER BLAIR: I apologize and the  
5 record will show that.

6 MR. HOLLIES: But I did give it to her.

7 COMMISSIONER BLAIR: Having the direct and  
8 written cross-examination entered into the record, we  
9 have received one request for oral cross-examination  
10 of Witness Lundahl from GameFly.

11 Does any other participant wish to cross-  
12 examine the witness?

13 If not, Mr. Levy, would you please begin  
14 your cross-examination?

15 MR. LEVY: Thank you, Commissioner Blair.

16 Mr. Lundahl, my name is David Levy for  
17 GameFly.

18 Before I begin my cross-examination, I would  
19 also like to designate into the record additional  
20 written-cross examination, additional discovery  
21 responses that were received after the last batch.

22 CROSS-EXAMINATION

23 BY MR. LEVY:

24 Q Do you have before you two copies of the  
25 document marked "Witness Lundahl, USPS-T-4 with a list

1 of interrogatory answers going halfway down the page?

2 A Yes, I do.

3 Q Do you have two copies?

4 A Yes.

5 Q Have you had a chance to review those?

6 A I believe these are the same as was in my  
7 binder earlier, so that answer would be yes.

8 MR. LEVY: For the record, it's a list of  
9 interrogatory answers beginning with GFL-USPS-T4-4  
10 through 9, Supplemental Answers, and the last item is  
11 GFL-USPS-TR-44 through 9, redacted, and the list of  
12 the items appears on the cover sheet.

13 BY MR. LUNDAHL:

14 Q If you were asked to testify today would  
15 your answers be as set forth in these documents?

16 A Yes, sir.

17 MR. LEVY: I'm going to approach the witness  
18 and take the two copies and hand them to the reporter  
19 and ask that they be entered into evidence and  
20 transcribed into the record.

21 COMMISSIONER BLAIR: Any objection?

22 MR. HOLLIES: No objection, but I would note  
23 for the record that the response to No. 47 has had a  
24 letter T added to the word "though" becoming  
25 "thought", and that in the response to No. 49 the word

1 "than" was changed to "from", and those are in the  
2 sets that the witness has.

3 COMMISSIONER BLAIR: The record will so  
4 note.

5 (The document referred to was  
6 marked for identification as  
7 GFL-USPS-T4-4 through 9,  
8 Supplemental Answers, and  
9 GFL-USPS-TR-44 through 9,  
10 redacted, and were received  
11 in evidence.)

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## WITNESS LUNDAHL (USPS-T-4)

DESIGNATIONS OF WRITTEN CROSS EXAMINATION  
CONFIDENTIAL RESPONSES REDACTED

GFL/USPS-T4-4 through 9 (Supplemental Answers)  
GFL/USPS-T4-12 (Supplemental Answer)  
GFL/USPS-T4-13 (Supplemental Answer)  
GFL/USPS-T4-16 (Supplemental Answer) [REDACTED]  
GFL/USPS-T4-17 through 19 [GFL/USPS-T4-17 REDACTED]  
GFL/USPS-T4-22  
GFL/USPS-T4-23(a) (Supplemental Answer)  
GFL/USPS-T4-23(d) (Supplemental Answer)  
GFL/USPS-T4-23(f) (Supplemental Answer)  
GFL/USPS-T4-28 [REDACTED]  
GFL/USPS-T4-29 (Supplemental Answer)  
GFL/USPS-T4-31(a) (Supplemental Answer)  
GFL/USPS-T4-33(c) (Supplemental Answer)  
GFL/USPS-T4-35(a)  
GFL/USPS-T4-37(a) (Supplemental Answer)  
GFL/USPS-T4-37(c through d) (Supplemental Answer)  
GFL/USPS-T4-39 (Supplemental Answer)  
GFL/USPS-T4-40(a) (Supplemental Answer) [REDACTED]  
GFL/USPS-T4-44 through 49 [GFL/USPS-T4-45 through 49 REDACTED]

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-4.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to DVDs; damage to mail from processing it on AFCS, DBCS or other automated letter processing equipment; damage to polycarbonate or other plastic objects from material fatigue or mechanical impact; videogame disk composition; videogame production processes.

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-5.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to DVDs.

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-6.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to mail from processing it on AFCS, DBCS or other automated letter processing equipment.

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-7.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning damage to polycarbonate or other plastic objects from material fatigue or mechanical impact.

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.



SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-8.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning videogame disk composition.

**RESPONSE:**

ATR did not conduct any studies specific to video game disc technology.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-9.** Please produce all studies, analyses, reports and similar documents performed by you or ATR concerning videogame production processes.

**RESPONSE:**

ATR did not review any information specific to the production of video game discs.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-12.** This question concerns pages 3-11 of your testimony (USPS-T-4), where you discuss a number of factors that you contend affect the rate of DVD breakage. Please produce all studies, analyses, compilations of data, and other information quantifying the effect of each such factor on the rate of DVD breakage.

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-13.** This question concerns pages 11-14 of your testimony (USPS-T-4), where you discuss various methods of reducing damage to DVDs from Postal Service equipment. Please produce all studies, analyses, compilations of data, and other information on the effectiveness of each such method in reducing damage to DVDs.

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-16.** Please produce all studies, analyses, compilations of data, and other information quantifying the effect of manual vs. automated letter processing on the breakage rates of DVDs that have been designed, manufactured, handled and mailed in compliance with the recommendations on pages 3-14 of your testimony (USPS-T-4).

**RESPONSE:**

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

ATR has performed tests and analysis on an experimental basis only. ATR was not involved in the actual implementation of any remedial actions. Later discussions with Netflix reveal that Netflix has implemented most of the ATR recommendations, as described below.

**[REDACTED]**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-17.** This questions concerns [sic] the standards and practices described on pages 3-14 of your testimony (USPS-T-4):

(a) Please identify the DVD rental companies to which your company has recommended adoption of these standards and practices.

(b) For each DVD rental company identified in response to part (a), please specify the extent to which the company has adopted each of the recommended standards and practices.

(c) For each standard or practice that your company has recommended but the DVD rental company has *not* adopted, please explain why the DVD rental company chose not to adopt the standard or practice.

(d) Please produce documents sufficient to verify your responses to the previous parts of this question.

**RESPONSE:**

(a) Netflix

(b) ATR was not involved in the actual implementation of any remedial actions. Later discussions with Netflix reveal that Netflix has implemented most of the ATR recommendations, as described below.

**[REDACTED]**

(c) ATR was not involved in the actual implementation of any remedial actions. **[REDACTED]**

(d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-18.** Since receiving or applying your advice on how to reduce DVD breakage, has Netflix communicated to the Postal Service or ATR a willingness to have its DVD mailers receive less manual culling and processing from the Postal Service, and more automated letter processing? Please produce all communications to and from Netflix on this point, as well as all internal communications within the Postal Service and ATR on this point.

**RESPONSE:**

I am not aware of any communications responsive to this discovery request.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-19.** Please identify each and every DVD rental company that, after learning of your advice on how to reduce DVD breakage, has communicated a willingness to have its DVD mailers receive less manual culling and processing by the Postal Service and more automated letter processing. Please produce all communications to and from the DVD rental company on this point, as well as all internal communications within the Postal Service on this point.

**RESPONSE:**

I am not aware of any communications responsive to this discovery request.



RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-22.** On page 2, lines 9-10, of your testimony (USPS-T-4), you state: "By way of contrast, Netflix has studied DVDs and their structure and composition."

(a) Please provide copies of all such studies, whether performed by Netflix employees, outside vendors or consultants, or a combination of the two.

(b) If you obtained any of your information about the Netflix studies from written communications or documents other than the studies themselves, please produce the communications and documents.

(c) If you obtained any of your information about the Netflix studies from oral communications, please state the date(s) of the communications, summarize the communications, and identify the sources of and witnesses to in [sic] the communications by name, title and employer.

(d) Please discuss your role (if any) in each of the Netflix studies of "DVDs and their structure and composition."

**RESPONSE:**

(a) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

(b) Not applicable

(c) Not applicable

(d) My role as a consultant was to manage the studies referenced in the response to (a).

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-23.** On page 3, line 20, of your testimony (USPS-T-4), you state: "More recently, my firm was retained by Netflix to analyze DVD breakage."

(a) Please provide the scope of work and period of performance for this project.

\*\*\*\*\*

(d) Please provide copies of all reports, briefings, analyses, workpapers and other documents that you or your firm provided to Netflix.

\*\*\*\*\*

(f) How did your firm become aware that Netflix wanted to have a study performed to analyze DVD breakage?

**RESPONSE:**

(a) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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(d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

\*\*\*\*\*

(f) Netflix contacted me directly.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-28.** This question concerns the "recommendations to Netflix" referenced on page 5, lines 7-9, of your testimony (USPS-T-4). Please identify the recommendations, produce any documents setting them forth, and describe the extent to which the recommendation were [sic] adopted by Netflix.

**RESPONSE:**

ATR did not prepare formal recommendations for Netflix. The Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010, contains the "recommendations to Netflix" that I referenced in my testimony. Discussions with Netflix reveal that Netflix has implemented most of the ATR recommendations, as described below.

**[REDACTED]**

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-29.** On page 6, lines 16 and 17 of your testimony (USPS-T-4), you say "A clea[n]er inside diameter hole results in more durability, reduced damage, and more accurate playing." Please provide the basis of this assertion, including any quantitative analysis which supports the assertion, the data underlying the analysis, the analysis plan, the results of the analysis, and the report(s) setting forth the results.

**RESPONSE:**

It is generally understood in failure analysis that surface defects act as stress concentrations when the part is under load. Cracks tend to form at stress concentrations and continued fatigue loading will encourage these cracks to propagate to the point of failure. ATR looked carefully at the quality of the ID on the DVDs since this is where the cracks formed that eventually led to the majority of the disc failures. The quality of the cut hole became a subject of concern and ATR performed several tests to evaluate the effect of a new cutter as compared with an older and presumably duller cutter. The test results indicated that there was a correlation. Newer and sharper cutters contributed to a longer fatigue life. Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-31.** On pages 7-8 of your testimony (USPS-T-4), you state with respect to UV curing that:

Testing results were difficult to validate with the number of parameters that cannot be controlled. However, the damage to plastics caused by UV exposure is commonly understood, and Netflix also understood the likely ramification from too much UV exposure. Netflix reviewed its printing techniques and the exposure levels at all steps of the fabrication process. (See appendix ATR 4 for a summary chart of the improved printing techniques.)

(a) Please identify and produce the referenced testing results, along with the underlying study design, data and workpapers.

\*\*\*\*\*

**RESPONSE:**

(a) ATR attempted to isolate the ultraviolet exposure effects by looking at different printing techniques. The screen printing process requires an ultraviolet cure cycle between each color layer. As a result, a one color print has fewer ultraviolet cure cycles than a five color printed label.

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

\*\*\*\*\*

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-33.** This question concerns page 10 of your study (USPS-T-4), in which you state that "ATR looked at impact failures as the predominant mechanism for the Blu-ray discs."

\*\*\*\*\*

(c) If so, please identify the client and the period of performance, and produce the study and workpapers.

**RESPONSE:**

\*\*\*\*\*

(c) The client is Netflix. Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-35.** On page 11, lines 15-17, of your testimony (USPS-T-4), you state that "Many mailers have taken actions to reduce or even avoid the risks of damage described above without changing the type of mail processing they receive."

(a) Please identify each of the "many mailers" to whom you refer.

\*\*\*\*\*

**RESPONSE:**

(a) I know that Netflix has installed reinforcement rings on part of its disc population. The reinforcement rings are a commercial product, and I do not know the identities of other mailers who use this product or take other actions to reduce or avoid disc damage.

\*\*\*\*\*

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-37.** On page 11, lines 24-25, of your testimony (USPS-T-4), you state: "ATR evaluated the use of reinforcement rings with an FEM study and later with actual destructive testing."

(a) For what client(s) did ATR perform these evaluations?

\*\*\*\*\*

(c) Please produce the documents that defined the scope of the study or studies.

(d) Please produce the report of the results of the study or studies, the study plan(s), the underlying data, and any analysis methods.

\*\*\*\*\*

**RESPONSE:**

(a) Netflix

\*\*\*\*\*

(c) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

(d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

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SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-39.** On page 12, lines 12-15, of your testimony (USPS-T-4), you state: "ATR...recommended that these spindles be inspected and the manufacturing process should avoid excessive handling by the inside diameter or the use of jewel cases."

- (a) To whom did ATR make these recommendations?
- (b) If ATR memorialized the recommendations in any documents, please produce them.
- (c) Please specify in quantitative terms how much handling is excessive?
- (d) On what data is your answer to part (c) based? Please produce the data and any studies or reports from the data were obtained[sic].
- (e) Please explain the relationship between damage to DVDs and the use of jewel cases, and produce all studies, analyses and data on which your response is based.
- (f) Do you contend that GameFly uses jewel cases for shipping or storing its DVDs? If your answer is anything but an unqualified no, please produce the information on which the answer is based.

**RESPONSE:**

- (a) Netflix
- (b) ATR did not memorialize these recommendations in any documents.
- (c) This is difficult or impossible to quantify. It is a cumulative fatigue problem so it is more useful to say that less handling is better.
- (d) Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

(e) Most jewel cases have some sort of central feature that captures the DVD by its inside diameter. Removing and replacing the DVD over these features can possibly damage the inside diameter of the DVD with small scratches causing stress concentrations where the stress is highest when the DVD is bent or flexed. Stress concentrations will accelerate crack formation and reduce the fatigue life of the DVD.

Please see the Appendix to the Response of the United States Postal Service to Motion of GameFly, Inc., to Compel the Postal Service to Answer GameFly Discovery Request or, in the Alternative to Strike Testimony of USPS Witness Robert Lundahl (USPS-T-4), filed under seal with the Commission on August 31, 2010.

(f) Gamefly's DVDs arrive in jewel cases from the manufacturer. Please see the response to GFL/USPS-T4-38(d).

SUPPLEMENTAL RESPONSE OF UNITED STATES POSTAL SERVICE  
WITNESS ROBERT LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY,  
INC.

**GFL/USPS-T4-40.** On page 13, lines 10-12, of your testimony (USPS-T-4), you state, "Netflix has succeeded in reducing the amount of handling by developing automated internal handling processing and requiring minimal handling of its DVDs within the Postal Service processing network."

(a) Please describe the specific methods of "automated internal handling processing" used by Netflix.

\*\*\*\*\*

**RESPONSE:**

(a) Netflix understands the relationship between increasing the fatigue life of DVDs by reducing the number of stress cycles from material handling and sortation equipment, and took steps to minimize these stress cycles in its internal sorting operations.

Netflix implemented several different processes that could help reduce bending stresses in the service life of its DVDs.

**[REDACTED]**

\*\*\*\*\*

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-44.** Please confirm that the documents produced by the Postal Service on August 31 in ATR 1 – ATR 10, along with the document previously produced by the Postal Service and Bates numbered at GFL7178 et seq., constitute all of the studies, analyses, and reports that ATR performed under contract to Netflix regarding disc breakage and breakage mitigation efforts. If any other responsive studies, analyses, reports or other documents have not yet been produced to GameFly, please produce them.

**RESPONSE:**

Confirmed.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-45.** This question refers to the document produced by the Postal Service on or about August 31, 2010, and Bates numbered by the Postal Service as USPS091816.

(a) Please provide a detailed description of the test that yielded the results shown on the cited page.

(b) Please confirm that the results shown on the cited page were the final results of this test. If not confirmed, please provide an update to the tables presented on this page.

(c) Please define the following terms as used on this page: **[BEGIN NETFLIX PROPRIETARY]**

**RESPONSE:**

(a) **[REDACTED]**

(b) **[REDACTED]**

(c) **[REDACTED]**

(d) **[REDACTED]**

(e) **[REDACTED]**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-46. [REDACTED]**

**RESPONSE:**

**[REDACTED]**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-47. [REDACTED]**

**RESPONSE:**

**[REDACTED]**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-48. [REDACTED]**

**RESPONSE:**

**[REDACTED]**



RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROBERT  
LUNDAHL TO DISCOVERY REQUESTS OF GAMEFLY, INC.

**GFL/USPS-T4-49. [REDACTED]**

**RESPONSE:**

**[REDACTED]**

1           MR. LEVY:  If I may proceed with my  
2       questions.

3           COMMISSIONER BLAIR:  Please go ahead.

4           BY MR. LUNDAHL:

5           Q     Mr. Lundahl, DVD mail can be processed on  
6       the GameFly's automated letter processing equipment,  
7       is that correct?

8           A     Correct.

9           Q     Now, automated letter processing equipment  
10      includes DBCS equipment, is that correct?

11          A     Correct.

12          Q     And that acronym stands for?

13          A     Digital Bar Code Sorter.

14          Q     And automated letter processing equipment  
15      also includes AFCS equipment?

16          A     Correct.

17          Q     And that stands for Automated Facer --

18          A     -- Canceler System.

19          Q     Thanks.  Now, processing DVD mail through  
20      the Postal Service's letter operating equipment can  
21      break DVDs, is that correct?

22          A     Correct.

23          Q     In fact, processing DVD mail through the  
24      Postal Service's letter processing equipment does  
25      break DVDs?

1           A     Correct.

2           Q     In processing DVD mail through the Postal  
3     Service's letter processing equipment causes more  
4     breakages than processing the same DVD mail manually,  
5     isn't that correct?

6           A     I haven't done a comparison of a manual  
7     operation versus an automated operation.

8           Q     So you don't know?

9           A     Well, I don't have any test results that  
10    would back that up with empirical data.

11          Q     Do you have any opinion based on your  
12    understanding of the operations involved?

13          A     Yes, but the operations manually could be  
14    quite different. You know, automated at least you  
15    know what the machinery is and the path it takes. You  
16    know, different sites handle things different a manual  
17    operation so it would be hard to say unless I saw them  
18    side by side.

19          Q     So you can't say whether all other things  
20    being equal minimizing the number of automated sorts  
21    is likely to reduce the amount of breakage?

22          A     Not specifically knowing what the manual  
23    process would be. I think being as it's a fatigue-  
24    related issue the less bending you subject the DVD to  
25    the better.

1 Q The better in the sense of less breakage?

2 A Less fatigue damage.

3 Q And fatigue damage can include breakage?

4 A Yes, breakage is usually the end result of a  
5 fatigue life. Fatigue is a cumulative damage, if you  
6 will, until it leads up to catastrophic damage that  
7 takes the part of the element no longer serviceable.

8 Q Would you turn to page 13 of your testimony?

9 A Yes.

10 Q Beginning on line 18 appears the following  
11 sentence, two sentences which I will read, "Minimizing  
12 the number of sorts minimizes the number of paths  
13 undertaken through the sorters and minimizes the  
14 number of bends that the DVD is subjected to. This  
15 slows the rate of fatigue and increases the number of  
16 rental cycles before the fatigue sets in."

17 Did I read that correctly?

18 A Correct. And that passage that I just read  
19 is consistent with the word you just said in my last  
20 question and answer with you?

21 A Correct. Minimizing the number of bending  
22 cycles minimizes the growth of fatigue.

23 Q Do you have any reason to believe that  
24 manual processing of DVDs causes the same amount of  
25 fatigue stress?

1           A     Do I have any reason to believe that it  
2     causes the same amount of fatigue stress?

3           Q     Yes.

4           A     No, and I don't have any reason not to  
5     believe that either because I really haven't tested  
6     that. I know from some of our transportation tests  
7     that was predominantly a manual operation, and we did  
8     see damage to the DVDs that were simply transported.  
9     There was no automation there involved at all. So as  
10    the case in point, there is an example where there was  
11    no automation whatsoever.

12          Q     Have you ever seen any indication that the  
13    manual handling of DVDs inside a mail processing  
14    facility causes the same rate of damage as automated  
15    letter processing of DVDs?

16          A     I haven't done any test to that effect.

17          Q     Has anyone told you that the same rate of  
18    damage occurs?

19          A     No.

20          Q     Do you have any intuitive reason to believe  
21    that the same rate of damage occurs based on your  
22    observations of mail processing equipment?

23          A     Well, intuition versus, you know, test  
24    background, you know, are two different things. You  
25    know, what we did is do as carefully as we could

1       orchestrated tests with control samples to test  
2       different paths on sorters.

3               If I had also done that with manual  
4       operations, then I would be more comfortable in  
5       offering an opinion on that.

6           Q     But you didn't do testing of comparing the  
7       two processes, did you?

8           A     Automated versus manual.

9           Q     Right.

10          A     No.

11          Q     Which is why I asked you whether you have  
12       any intuitive reason to believe that manual processing  
13       causes much breakage of damage. My question was  
14       asking for you intuition as an expert witness.

15          A     Manual processing varies widely. On the top  
16       level one would think that less automation would be  
17       better, but there are so many different parameters in  
18       how someone might handle the mail it's very difficult  
19       to answer.

20          Q     Let me switch the subject to a different  
21       kind of issue, processing issue.

22               Are you aware that the Postal Service has  
23       current and past standard operating procedures called  
24       for Netflix pieces to be culled into a particular type  
25       of tray?

1           A     No, I am not other than what I read here in  
2     the testimony that that was a standard operating  
3     procedure. I saw reference to that.

4           Q     Are you aware that the standard operating  
5     procedures call for the trays to be sleeved?

6           A     I don't believe so.

7           Q     Are you aware whether there is any policy or  
8     practice of limiting the height of the stack of trays?

9           A     You mean at the output of the sorters?

10          Q     Limiting the number of trays that can be  
11     stacked on top of one another.

12          A     I think there is a natural limit to when  
13     trays are stacked in a GPMC or a rolling container,  
14     and how many can be put on the top shelf to the lower  
15     shelf just from a safety tip standard. I have not  
16     read the standard operating procedure, if there is  
17     one, for exactly how many layers.

18          Q     So you don't know whether to reduce breakage  
19     there is a limit imposed on the number of levels that  
20     is below the tip level tipping point?

21          A     No, I don't.

22                 MR. LEVY: I'm going to mark as Cross-  
23     Examination Exhibit GFL-CX-1 a two-page document which  
24     I will identify as Bates No. GFL520 through 522, and  
25     this is the public version that has been redacted by

1 the Commission's order.

2 (The document referred to was  
3 marked for identification as  
4 GFL-CX-1.)

5 BY MR. LUNDAHL:

6 Q My first question and possibly my last  
7 question about this document, Mr. Lundahl, is have you  
8 ever seen this document before?

9 A I do not believe so.

10 MR. HOLLIES: Excuse me. I would like to  
11 note for the record that that particular document was  
12 not provided to the witness in advance, so this  
13 response, I guess, becomes predicable. Thank you.

14 COMMISSIONER BLAIR: The record will so  
15 note. And do you have copies for the bench? Thank  
16 you.

17 BY MR. LUNDAHL:

18 Q Okay, Mr. Lundahl, your testimony describes  
19 in some ways that you believe will reduce the rate of  
20 DVD breakage from automated letter processing?

21 A Yes, sir.

22 Q In fact, that's the bulk of your testimony,  
23 isn't it?

24 A Yes, sir.

25 Q Now do the techniques that you recommend



1 eliminate DVD breakage from automated letter  
2 processing?

3 A No.

4 Q Your company did a number of tests of DVD  
5 breakage during the period 2006 through 2009.

6 A Yes.

7 Q And you tested a variety of possible  
8 techniques for reducing DVD breakage?

9 A Yes.

10 Q And approximately different tests did your  
11 company perform? I'm not looking for a precise  
12 answer.

13 A Yeah, a lot. We have broken more DVDs than  
14 I think anyone around. We probably ran, you know, 50,  
15 75 different tests. Some were smaller, some were  
16 larger, and many different parameters we have done to  
17 isolate.

18 Q And none of the tests that your company  
19 performed revealed any method that would completely  
20 eliminate DVD breakage from automated letter  
21 processing?

22 A None of the tests that we performed.

23 Q Have you ever told any client that a good  
24 way to minimize disc breakage is to minimize exposure  
25 of DVDs to AFCSES and DBCSES?

1           A     That was not one of my specific  
2     recommendations, no.

3           Q     Do you think that's good advice?

4           A     I think that our studies show that DVDs fail  
5     from fatigue, which is repeated sending. You know,  
6     certainly mail processing provides an opportunity to  
7     bend a DVD, so you know, minimizing the number of  
8     times you do that is always a good idea, but it's a  
9     general thing. It's not an absolute sure thing it's  
10    going to fail but it's just the nature of fatigue  
11    which is accumulated wear.

12          Q     Now suppose a DVD rental company follows all  
13    of the recommendations that you've summarized in your  
14    testimony, let's suppose that those DVDs are given  
15    automated letter processing rather than manual  
16    processing. My question is aren't the DVDs still  
17    likely to suffer more breakage from the automated  
18    letter processing than they would from manual  
19    processing by the Postal Service?

20               MR. HOLLIES: Objection. That has been  
21    asked and answered several times.

22               MR. LEVY: Let me ask a slightly different  
23    question.

24               COMMISSIONER BLAIR: Thank you.

25               BY MR. LUNDAHL:

1           Q     Would you go to your answer to Interrogatory  
2     GFL-USPS-T4-14?

3           A     If I can figure out how to get there.  It's  
4     not in this package, right?  Excuse me a second.  Let  
5     me try to find that.

6                     Yes, I have the response.  Please ask the  
7     question again so I can --

8           Q     My question is whether you had it in front  
9     of you.

10          A     Yes, now I do.

11          Q     Is your answer to that question still your  
12     answer?

13          A     Correct.

14          Q     Let me ask one follow-up question.  You will  
15     agree that manual processing involves less bending  
16     than automated letter processing?

17          A     It would seem so.

18          Q     Would you go to page 2 of your testimony?  
19     Let me know when you're there.

20          A     Yes.

21          Q     Line 13 appears the statement that,  
22     "Analysis leads me to conclude that GameFly is not  
23     similarly situated to Netflix."

24                     Do you see that?

25          A     Yes.

1           Q     What is your definition of the term  
2     "similarly situated" as you used it in that phrase?

3           A     GameFly -- well, Netflix spent a lot of time  
4     and energy studying the nature of DVDs, studying the  
5     failures that were occurring, and employing us to test  
6     different methods and see if we could figure out where  
7     those failures were coming and what kind of remedial  
8     actions could be done to avoid those failures.

9                     Based on some of the limited insight I've  
10    had to what GameFly has done I did not get the  
11    impression that they had conducted any kind of study  
12    at that kind of level, had done any significant amount  
13    of testing, analysis of materials, analysis of DVDs or  
14    basic failure analysis itself. So I didn't really  
15    feel that they were in a similar position in terms of  
16    making statements regarding DVDs or what could be done  
17    to improve the strength of DVDs.

18          Q     So in this sentence by the phrase "similarly  
19    situated" you were essentially saying that you don't  
20    think that GameFly did as much testing as Netflix did?

21          A     I don't think they had the same level of  
22    understanding what their failure were, where they were  
23    coming from and what to do about it.

24          Q     Are you aware that similarly situated is a  
25    term used by lawyers?

1           A     No.

2           Q     So you had no intention in this sentence of  
3     using it in whatever sense lawyers might use the  
4     phrase?

5           A     No. No, I didn't.

6           Q     And just to belabor the obvious, you're not  
7     claiming to be an expert on this or any other legal  
8     phrase?

9           A     No, absolutely not.

10          Q     Thanks. Would you go to your answer to  
11     Interrogatory No. 35(c); that is, GFL-USPS-T4-35(c),  
12     and let me know when you are there.

13          A     Okay. Yes, I am there.

14          Q     There you state in your answer, "Mailers may  
15     contact the Postal Service to encourage a particular  
16     type of processing for their mail. Postal managers  
17     make their decision based on processing efficiency  
18     concerns."

19                 Do you see that sentence?

20          A     Yes.

21          Q     Now, the decisions, quote decisions unquote,  
22     referred to in that second sentence are decisions  
23     about the type of processing given to a customer's  
24     mail; is that correct?

25          A     Correct.

1           Q     Have you ever modeled the Postal Service's  
2 costs of processing DVD mailers?

3           A     No, I have not.

4           Q     Have you ever studied the subject?

5           A     No.

6           Q     Has any at ATR ever studied the subject?

7           A     No.

8           Q     So is your basis for the quoted sentence was  
9 somebody else at the Postal Service told you?

10          A     No, not directly. Just experience out in  
11 the mailroom floor as we've in the course of our  
12 business have looked at other bits of automation. You  
13 know, as I said in the beginning we did the robotics  
14 deployment, the first R&D for robotics in the Postal  
15 Service, and it was evident that there was some things  
16 that weren't going to be run through the robots  
17 because they were decided locally that they were too  
18 heavy or they were handled differently.

19                It was evident that there was an amount of  
20 local control over how mail was processed. I'm  
21 assuming that any, you know, postal manager would be  
22 making those kinds of decision in his plant.

23          Q     The verb there was "assuming"?

24          A     Yes.

25          Q     Are robotics used to process DVD mail?

1           A     They certainly could be. I have to think  
2     about that. I think they could be in that mail  
3     stream.

4           Q     I want to tender to you two different  
5     concepts. One is that the Postal Service gives some  
6     consideration to efficiency in processing decisions,  
7     and the other concept is the Postal Service bases its  
8     processing decisions solely on maximizing efficiency.

9                     Do you understand the difference between  
10    those two concepts?

11          A     Let me think about that again. Would you  
12    restate those?

13          Q     Yes. Once concept is efficiency is one of  
14    several factors considered. The other concept is  
15    efficiency is the only factor considered. Do you  
16    understand the difference between the two concepts, at  
17    least at the high level?

18          A     Right. One is a singular and one is a  
19    summary of effects.

20          Q     You're not testifying here that the Postal  
21    Service makes processing decisions solely to maximize  
22    efficiency?

23          A     I have never been in one of these decision  
24    meetings so I couldn't really say. I would think, you  
25    know, the number one rule is get the mail out, so I

1 think processing efficiency is right up there at the  
2 top of the list, but I really don't know the whole  
3 scope of decisions or things that might play into  
4 that.

5 Q Thanks. Would you go to page 13 of your  
6 testimony?

7 A Yes.

8 Q Now there you have a second on  
9 transportation, correct?

10 A Uh-huh.

11 Q And a point you make there about breakage is  
12 that, "Minimizing of the number of sorts minimizes the  
13 number of paths through the sorters and minimizes the  
14 number of bends that the DVD is subjected to. This  
15 slows the rate of fatigue and increases the number of  
16 rental cycles before fatigue sets in."

17 Did I read that right?

18 A Correct.

19 Q Now, how does providing a mailer's own  
20 transportation affect the number of sorts required on  
21 a piece of mail?

22 A Well, the wider distribution of points where  
23 mail enters the system gives it a shorter path to the  
24 end user. You know, if all DVDs came from one spot in  
25 the United States, they would certainly go through



1 several mail processing facilities to get to one of  
2 the corners of the country versus, you know, staging  
3 facilities in closer proximity to the user, they would  
4 go through less different mail processing plants to  
5 get to the end user.

6 Q But doesn't the number of sorts that a piece  
7 receives on its journey also depend on when a bundle  
8 or other container is broken up during the journey?

9 A I'm sure, yes.

10 Q I mean, a piece that travels across the  
11 country for 3,000 miles is part of a collection of  
12 pieces that aren't broken up until the final post  
13 office doesn't necessarily receive a lot of sorts.

14 A That could be true, yeah.

15 Q Now to change the subject, you haven't  
16 studied flat sorters break discs, have you?

17 A No, I have not.

18 Q And you haven't studied how GameFly could  
19 reduce disc breakage on flat sorters, have you?

20 A Not specifically on a flat sorter, but I'm  
21 sure some of the same techniques would apply.

22 Q Flat sorters have -- I'm sorry. I withdraw  
23 that.

24 MR. LEVY: This is all the questions,  
25 Commissioner Blair, that I have for the open session.

1 I do have a few questions for a closed session, but I  
2 think it's been the practice now to have redirect  
3 based on the open session questions.

4 COMMISSIONER BLAIR: Well, I wanted to see  
5 if any other participants have any follow-up  
6 questions? Public Representative, Mr. Costich.

7 MR. COSTICH: Thank you, Commissioner Blair.  
8 No.

9 COMMISSIONER BLAIR: I also see at the  
10 counsel table a representative from Netflix.

11 MR. MAY: Yes.

12 COMMISSIONER BLAIR: But you're not a party  
13 to this proceeding.

14 MR. MAY: No.

15 COMMISSIONER BLAIR: And just for the record  
16 would you identify yourself, please?

17 MR MAY: Timothy May.

18 COMMISSIONER BLAIR: Thank you.

19 At this point I would like to yield to my  
20 colleagues for questions from the bench. Commissioner  
21 Langley? Commissioner Acton?

22 COMMISSIONER ACTON: Thank you, Commissioner  
23 Blair.

24 I have one question for you, Mr. Lundahl.  
25 Thank you for your testimony this morning. Counsel

1 asked you about your understanding of the terminology  
2 for similarly situated. You use it in your testimony.  
3 What's your usage of that? How are you interpreting  
4 its application in this context?

5 THE WITNESS: My interpretation was that  
6 they were not in the same position to render an  
7 opinion on the damage or vulnerability of DVDs based  
8 on their experience doing studying and testing. I  
9 didn't feel that they were in the same situation in  
10 terms of having a background as Netflix would,  
11 extensive amount of testing, failure analysis, broken  
12 DVDs, and all the things that we did to try to zero in  
13 on what the problems might be.

14 COMMISSIONER ACTON: Thanks very much.

15 COMMISSIONER BLAIR: Vice Chairman Hammond.

16 VICE CHAIRMAN HAMMOND: I have no question  
17 now. Thank you.

18 COMMISSIONER BLAIR: Thank you.

19 Mr. Hollies, would you like some time with  
20 your present witness to discuss the need for any  
21 redirect?

22 MR. HOLLIES: Yes, I certainly would. Ten  
23 minutes, please.

24 COMMISSIONER BLAIR: Okay, we will give you  
25 12, how is that, at 10:35.

1 (Whereupon, a short recess was taken.)

2 COMMISSIONER BLAIR: The hearing will  
3 reconvene. Mr. Hollies, would you like to engage in  
4 any redirect with your witness?

5 MR. HOLLIES: Yes, I have a couple of quick  
6 questions.

7 COMMISSIONER BLAIR: Please proceed.

8 REDIRECT EXAMINATION

9 BY MR. HOLLIES:

10 Q Mr. Lundahl, what is your opinion about the  
11 comparability of DVDs? That is, between the ones that  
12 Netflix mails, and what you know about what GameFly  
13 mailed?

14 A I'm sorry, I couldn't -- could counsel  
15 repeat the last three words? I did not hear them.

16 Q The last three words, that GameFly mailed?

17 MR. LEVY: I am going to object to that  
18 question as beyond the scope of cross. I did not ask  
19 the witness to compare.

20 MR. HOLLIES: With all respect, there was  
21 extensive questioning about the similarity of breakage  
22 rates, or the witness' knowledge about similarity of  
23 breakage rates as between different handling methods.

24 There was also some attempt to discuss the  
25 substantial similarity or not of Netflix and GameFly,

1 and both of those topics opened up this question.

2 MR. LEVY: I withdraw the objection.

3 COMMISSIONER BLAIR: It is so noted. Please  
4 proceed, Mr. Hollies.

5 BY MR. HOLLIES:

6 Q Do you understand the question, or should I  
7 repeat it?

8 A Say it one more time for me.

9 Q It will probably come out a little bit  
10 different, but that's okay. What if any is your  
11 opinion about the similarities or differences between  
12 DVDs mailed by Netflix, compared to those mailed by  
13 GameFly?

14 A Well, there is several things. I think from  
15 early on based on all the testing that we had done  
16 with Netflix and all of the reporting on the different  
17 results and trends from our fatigue test, I think  
18 there was evidence from the very beginning of our  
19 relationship there that there was elements that made a  
20 difference.

21 With Netflix, it was evident that they had  
22 an internal staff of people that were following up on  
23 these different items. One of the first ones that I  
24 know that we identified in the very beginning of it  
25 was looking at different manufacturers of DVDs.

1           You know, statistically seeing which ones  
2       failed sooner than others, and there was a clear  
3       correlation. I can assume that they probably thought  
4       about that when they placed their next order. I think  
5       the whole cutter was something that we -- that when  
6       they finished the DVD, or they made the parts for them  
7       to halve the DVD, they cut the center hole.

8           We identified that as a stress  
9       concentration, and it was probably a sensitive area  
10      for surface finish, and they had also indicated that  
11      they had done tests on both cutter light, how fast the  
12      cutter went through the material. I think there is  
13      also a mold temperature on how hot the plastic was  
14      when they cut it. It's quite warm after they have  
15      just pressed it.

16           So it was evidence that they were already  
17      working there, and what we had done empirically  
18      breaking a lot of disks was to kind of validate the  
19      direction that they were going in. I know that they  
20      were also aware of the different qualities of  
21      polycarbon and the material, and how the material  
22      characteristics could change based on the amount of  
23      moisture in the polycarbon before it actually goes  
24      into the injection bowl.

25           This was perhaps an offshoot of different

1 manufactured quality. Even within a manufacturer, we  
2 would see trends between different machines, and  
3 Netflix had a very active participation with large  
4 replicators that were making DVDs with them.

5 They were all in there on those weekly  
6 meetings where we talked about our studies, and our  
7 failure analysis results, and they were very active in  
8 pursuing any of these upgrades or tighter tolerances  
9 that they could for these.

10 Subsequently later -- and I think that we  
11 listed that in the supplementary responses, they have  
12 implemented nearly all of the provisions or  
13 recommendations that we made through the course of our  
14 discussions.

15 Q And so what is the specific difference  
16 between Netflix's DVDs and GameFly's DVDs?

17 A Nowadays there is quite a few. Nowadays, I  
18 believe that all of Netflix's DVDs have reinforcement  
19 rings put on there. I think that is nearly a hundred  
20 percent. I think there is also that they have  
21 prepared a special specification for their replicators  
22 and the materials that are used.

23 There is a wide range in the quality of the  
24 polycarbonates, and I believe that a new specification  
25 for the replicators that specifies what grade of

1 polycarbonates are used. I know that they thought to  
2 minimize UV exposure based on some of the trends that  
3 we have seen.

4 Most of the Netflix DVDs that you will see  
5 now are one color DVDs to minimize how many times they  
6 are flashed. I know that they have tightened the  
7 dimensional tolerances on the DVDs. There is always  
8 the manufacturing tolerance of plus or minus, you  
9 know, thicknesses.

10 And I think that they have tightened that  
11 tolerance towards the thicker side of the range, which  
12 makes them stronger and more robust. There is also  
13 the whole issue of the cutter quality that cuts the  
14 hole.

15 It is my understanding that they now have  
16 the specific procedure with their replicators for how  
17 the hole is cut, and how long the cutter has been in  
18 service, and probably there are several other  
19 parameters as far as temperature and speed.

20 I also understand that they have jointly  
21 with their large replicators, Sony and Sinram, they  
22 have pursued a new coating specifically on the Blu-ray  
23 that enhances their strength and their resistance to  
24 perceived cracking. So I believe that I listed about  
25 seven different things there, and I think that those



1 are widely employed today.

2 Q So are they employed by both Netflix and  
3 GameFly?

4 A I do not know what GameFly has done. Based  
5 on what I read in this testimony, and in earlier  
6 testimony, it doesn't seem like they have done these  
7 same features or changes.

8 Q And so the net effect of these measures that  
9 Netflix has undertaken is what with respect to DVD  
10 breakage?

11 A It has reduced it significantly. They are  
12 getting more turns out of their DVDs. You know, the  
13 numbers that I have heard are around 50 percent  
14 improvement in light, and in the number of turns that  
15 they get.

16 And that is not an official test report.  
17 That is sort of telephone information, and talking  
18 with my program manager and counterpart out there.

19 Q What if any relationship do you see between  
20 distance, travel, and DVD damage?

21 A I think there is a lot of things there that  
22 could be there without really riding along with it.  
23 It would be hard to see firsthand. Certainly the  
24 greater distance on something traveled by ground, it  
25 seems logical that there would be -- that the disks

1 would be subjected to more jostling and bumps, and  
2 vibrations.

3 Certainly every time the GPMC is rolled in  
4 and out of the loading docks, and there is a certain  
5 handling even though the DVD is not being handled  
6 themselves, there is a certain handling of the GPMC  
7 itself.

8 We did notice that there was different  
9 characteristics of how trays were loaded in the GPMCs,  
10 and whether they were long wise or brick stacked, and  
11 so all the handling, which would likely be a function  
12 of distance and how much truck time, looks like that  
13 could certainly be a factor.

14 Certainly any time a tray is removed from a  
15 GPMC, and set on a conveyor, or pulled out and put  
16 back in the GPMC, and any time a tray has gone through  
17 any kind of automated processing, much less the  
18 sorting itself, would seem to increase the chances to  
19 sustain some damage, or at least fatigue damage.

20 Q Based on your understanding what if any  
21 impacts would weather have on DVD damage?

22 A We did do --

23 MR. LEVY: Excuse me, but I am going to  
24 object to that. There wasn't a word about weather in  
25 any of my questions.

1           MR. HOLLIES: There were certainly questions  
2 about the kinds of things that can cause damage, and  
3 this is one more of those.

4           MR. LEVY: But I didn't ask about weather.  
5 I asked about other things.

6           COMMISSIONER BLAIR: I'll allow it at this  
7 point, and following the conclusion of the hearing, if  
8 you want to have a motion to strike, we can entertain  
9 that in writing. In terms of weather, we did not  
10 really find any smoking gun from the tests that we had  
11 done.

12           We did look at some DVDs that had been  
13 handled in air cargo to see if perhaps there was  
14 something going on there. We never got any conclusive  
15 results, but we didn't run a extensive test on that  
16 either.

17           I would think in general that it is well  
18 understood with plastic, and a lot of other materials,  
19 that they are more brittle at lower temperatures.  
20 However, we didn't in any of our testing find any  
21 specific spots where we thought that was an issue.

22           Q     Is there a correlation between distance  
23 traveled, and weather conditions to which the DVDs may  
24 be exposed?

25           A     I would certainly think so. You know, most

1 of the ground transportation is not air-conditioned,  
2 and so I would think -- and this is conjecture on my  
3 part, but trucks up in the northwest would probably  
4 chill down the DVDs a lot more than trucks in the  
5 south, although we have done no specific tests on  
6 that. It seems like the logical approach.

7 Q Based on your general understanding of the  
8 behavior of plastics, and the cold, would a DVD that  
9 is cold be more or less brittle?

10 A More brittle.

11 MR. HOLLIES: Thank you. That concludes the  
12 redirect.

13 COMMISSIONER BLAIR: Mr. Levy, do you have  
14 any re-cross as a result of the redirect?

15 MR. LEVY: Yes, sir.

16 COMMISSIONER BLAIR: All right.

17 RE-CROSS-EXAMINATION

18 BY MR. LEVY:

19 Q Mr. Lundahl, your first line of questions  
20 and answers with counsel concerned all the things that  
21 Netflix has done to make its disks less vulnerable to  
22 breakage. Do you recall that?

23 A Correct.

24 Q In light of all of those steps that Netflix  
25 has done, has Netflix advised the Postal Service that

1 Netflix no longer wishes to have manual processing of  
2 its returned DVDs?

3 A I don't know.

4 Q Did you ask?

5 A No.

6 Q Did you think to ask?

7 A No.

8 MR. LEVY: No further questions.

9 COMMISSIONER BLAIR: Any questions from the  
10 Public Representative?

11 MR. COSTICH: Thank you, Commissioner Blair.  
12 No.

13 COMMISSIONER BLAIR: Thank you. Mr. Levy,  
14 do you have any additional cross-examination for Mr.  
15 Lundahl that would be conducted in a closed session?

16 MR. LEVY: Yes, sir, I do, but before we do  
17 that, if I may, I believe that I neglected to move  
18 Cross-Examination Exhibit GFL-CX-1 into evidence, and  
19 I do now, and I ask that it be transcribed into the  
20 public record.

21 COMMISSIONER BLAIR: Mr. Hollies.

22 MR. HOLLIES: We have no objection to its  
23 being transcribed, but there is no foundation on which  
24 it can be admitted into the evidentiary record.

25 COMMISSIONER BLAIR: Are you raising an

1 objection?

2 MR. HOLLIES: I am raising an objection to  
3 its going into the evidentiary record, and I am not  
4 objecting to its being transcribed into the  
5 transcript.

6 MR. LEVY: This is the issue that we  
7 litigated at great length early in this case. These  
8 are documents generated and created in the ordinary  
9 course of business by Postal Service officials.

10 There has been no challenge raised, and so  
11 their authenticity, and for the reasons that this  
12 Commission found in its ruling on the issue, these  
13 have the character of admissions, or statements  
14 against interests, or documents generated as business  
15 records.

16 And for the same reason that the Commission  
17 overruled the Postal Service's objection to the  
18 compendium of documents before, I believe that the  
19 objection should be overruled here as well, and the  
20 documents should be admitted into evidence.

21 COMMISSIONER BLAIR: Mr. Hollies, do you  
22 have any other further arguments for your objection?

23 MR. HOLLIES: Well, we have not established  
24 that it is in any sense authentic or reliable. The  
25 only foundation that exists for it is that it was

1 produced by the Postal Service. That doesn't make it  
2 a party admission or a statement made by the party.  
3 It just says that it started in our custody, and  
4 that's all, and it does not authenticate the document.

5 COMMISSIONER BLAIR: At this point, we will  
6 go ahead and accept it to be transcribed, and we will  
7 take your motion or your objection under advisement,  
8 and this panel will make a ruling at a later date.  
9 So, thank you. Mr. Levy, any re-cross?

10 MR. LEVY: Nothing further, Commissioner  
11 Blair.

12 (The document referred to,  
13 previously marked for  
14 identification as GFL-CX-1  
15 was received in evidence.)

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GFL-CX-1

## PROCESSING AND DISTRIBUTION CENTER OPERATIONS



February 15, 2005

PLANT MANAGERS, PROCESSING AND DISTRIBUTION CENTERS/FACILITIES

SUBJECT: Netflix Return Mail

Netflix On-Line DVD Rental Company receives customer returned DVDs through the U.S. Postal Service carrier service. The attached picture (Attachment #1) illustrates improper handling of Netflix DVD returns. The Netflix service improvement memorandum and service talk distributed September 2002 mandated the Netflix mailers be put in Extended Managed Mail (EMM) trays. Netflix believes stacking weight to be a possible contributor to DVD damage.

Upon receipt of this letter, please ensure consistent application of the following policy:

- Netflix return mail placed in EMM trays
- Netflix EMM trays placed in General Purpose Mail Containers (GPMCs)

The added support of the EMM trays and the GPMC center shelf will minimize the possibility of damage to Netflix products. (Attachment #2)

Please direct questions or concerns to [REDACTED], Operations Specialist, Processing and Distribution Center Operations at 202-268-4111.

US-154

US-161

## Attachments

cc: Managers, Operations Support (Area)  
Managers, In Plant Support (Area)  
District Managers

PUBLIC

475 L'Enfant Plaza NW  
Washington DC 20024  
202-268-4111  
FAC 202-268-4111

GFL0000520



VS-036

DEPUTY POSTMASTER GENERAL &amp; CEO



TO: All plant  
MgOS  
pms  
DMS  
DSS

RECEIVED

May 9, 2005

MAY 13, 2005

DISTRICT MANAGER  
GREATER IN DISTRICTVICE PRESIDENTS, AREA OPERATIONS  
MANAGER, CAPITAL METRO OPERATIONS

SUBJECT: Standardized Processing Procedures for DVD Returns

This is in reference to the memorandum (see attached) concerning Netflix Return Mail dated February 15 to plant managers from [redacted] Processing and Distribution Center Operations. In response to increasing concerns of high damage rates, we have conducted a review of digital video disc (DVD) return processing procedures at facilities recording the lowest breakage rates of DVDs being returned to our customers. We have found that low product damage rates are a direct result of full compliance with policies previously issued from headquarters. -VS-161

Areas are to reiterate to their staff the importance of verifying and complying with the standardized processing procedures. Processing and Distribution Centers/Facilities will identify a consolidation point for all letter trays destined to DVD mailers or subsequent U.S. Postal Service destination for final delivery. The following procedures should be used to ensure compliance:

**Tray Containerization**

The required Mail Transport Equipment (MTE) for DVD return mailings is the Extended Managed Mail (EMM) letter tray. The EMM tray's higher profile sidewalls enable the tray to be completely filled without the product exceeding the tray height, thus protecting the mail piece from damage. It is the responsibility of all managers at consolidation points to maintain an adequate number of trays to accommodate daily volumes because the use of EMM trays is critical to the protection of these mailings. Upon tray containerization, it is imperative that a tray sleeve is used for each EMM tray prior to subsequent consolidation to MTE rolling stock.

**Dispatch Containerization**

Upon verification that trays have been prepared properly, they will be loaded for dispatch in appropriate over-the-road rolling stock using a "brick-layered" stacking configuration. Regardless of the equipment type, DVD return trays are never to be stacked more than four layers high. The preferred piece of MTE to be used for tray volumes in excess of 12 is the shelved General Purpose Mail Container (GPMC). Eastern Region Mail Containers (ERMCs) are not to be used for tray volumes in excess of 12 unless a shelf is present. For tray volumes of 12 or less, GPMCs, ERMCs, or 1046 hampers are acceptable.

These procedures are to be implemented immediately in all facilities that receive or process DVDs being returned. Where warranted by volume, this also includes any collection points where letter carriers or dedicated collectors are able to identify, extract, and consolidate DVD mail products from regular collection volumes.

475 L'ENFANT PLAZA, SW  
WASHINGTON, DC 20260  
WWW.USPS.COM

PUBLIC

GFL0000521

PUBLIC

cc: Mr. [redacted]  
Mr. [redacted]  
Mr. [redacted]  
Mr. [redacted]  
Mr. [redacted]  
Mr. [redacted]  
Mr. [redacted]  
US-031  
US-051  
US-185  
US-153  
US-161  
US-148

Attachment

Any questions regarding this matter may be directed to [redacted] Processing and Distribution Center Operations, at 202-288-4064.

US-154

1                   COMMISSIONER BLAIR: Okay. And you did  
2 indicate that you had a subject matter for cross-  
3 examination in a closed session, correct?

4                   MR. LEVY: Yes.

5                   COMMISSIONER BLAIR: Okay. Well, then, Mr.  
6 Lundahl, you are excused for the moment, and please  
7 make yourself available so that we can complete your  
8 appearance later today. Since we are moving along, we  
9 can take a break at this point, or we could proceed  
10 with Mr. Belair, and I will look at Mr. Hollies to see  
11 if he would like to bring the witness in now, or would  
12 you like to have a short break?

13                  MR. HOLLIES: I don't think we need a break,  
14 per se. I guess there was some hope that we would be  
15 able to skip in and out of closed session, but that  
16 does not seem to be the way that you are intending, in  
17 which case, let's have a break long enough to shuffle  
18 the witnesses.

19                  MR. LEVY: Judge, may I be heard?

20                  COMMISSIONER BLAIR: Sure, Mr. Levy.

21                  MR. LEVY: I simply would request what I  
22 think Mr. Hollies was thinking about requesting, which  
23 is that we finish up with this witness before we go on  
24 to Mr. Belair. I think that is what was done in the  
25 previous round of the hearings, where you had a

1 witness public, and a witness confidential, and then  
2 you had the next witness public, and the next witness  
3 confidential.

4 COMMISSIONER BLAIR: Well, the way that we  
5 had scheduled today is that we would go through both  
6 witnesses, and if a closed session was necessary, and  
7 if both parties would like to continue into a closed  
8 session at this time, the presiding officer can  
9 accommodate that ruling. Is that acceptable for both  
10 parties?

11 MR. LEVY: That would be my request. Thank  
12 you.

13 MR. HOLLIES: The Postal Service has no  
14 objection to going forward.

15 COMMISSIONER BLAIR: So, at this point, we  
16 will be going into a closed hearing. Mr. Lundahl, you  
17 are still under oath at this time, and we are going to  
18 convene to continue the hearing, and this is going to  
19 allow cross-examination of the witness for the Postal  
20 Service.

21 (Whereupon, at 10:54 a.m., the hearing  
22 recessed to go into a confidential closed session.)

23 //

24 //

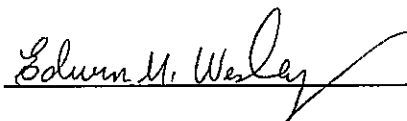
25 //

REPORTER'S CERTIFICATE

DOCKET NO.: C2009-1  
CASE TITLE: Complaint of Gamefly, Inc.  
HEARING DATE: October 5, 2010  
LOCATION: Washington, D.C.

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the Postal Regulatory Commission.

Date: October 5, 2010

A handwritten signature in cursive script, appearing to read "Edwin M. Wesley", is written over a horizontal line.

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